

# Silicon Pin Diodes

Mos Capacitors

## SINGLE PAD MOS CAPACITORS : SPACE & DEFENCE APPLICATIONS

| Voltage rating<br>V | Application     | Capacitance<br>pF | Tolerance |             | Pad type        | Dimension<br>per side<br>µm | Part Number<br>(Round pad)<br>20% tolerance | Part Number<br>(Square pad)<br>20% tolerance |
|---------------------|-----------------|-------------------|-----------|-------------|-----------------|-----------------------------|---|--|
|                     |                 |                   | Standard  | Options     |                 |                             |   |  |
|                     |                 |                   | %         |             |                 |                             |   |  |
| 40                  | MMIC decoupling | 8.2               | ± 20      | ±10, ±5, ±2 | Round or Square | 400                         | 400M106C8R2M                                | 400M106A8R2M                                 |
| 40                  | MMIC decoupling | 10                | ± 20      | ±10, ±5, ±2 | Round or Square | 400                         | 400M106C100M                                | 400M106A100M                                 |
| 40                  | MMIC decoupling | 12                | ± 20      | ±10, ±5, ±2 | Round or Square | 400                         | 400M106C120M                                | 400M106A120M                                 |
| 40                  | MMIC decoupling | 15                | ± 20      | ±10, ±5, ±2 | Round or Square | 400                         | 400M106C150M                                | 400M106A150M                                 |
| 40                  | MMIC decoupling | 18                | ± 20      | ±10, ±5, ±2 | Round           | 600                         | 400M107C180M                                | -  |
| 40                  | MMIC decoupling | 18                | ± 20      | ±10, ±5, ±2 | Square          | 540                         |   | 400M104A180M                                 |
| 40                  | MMIC decoupling | 22                | ± 20      | ±10, ±5, ±2 | Round           | 600                         | 400M107C220M                                | -  |
| 40                  | MMIC decoupling | 22                | ± 20      | ±10, ±5, ±2 | Square          | 540                         |   | 400M104A220M                                 |
| 40                  | MMIC decoupling | 27                | ± 20      | ±10, ±5, ±2 | Round           | 600                         | 400M107C270M                                | -  |
| 40                  | MMIC decoupling | 27                | ± 20      | ±10, ±5, ±2 | Square          | 540                         |   | 400M104A270M                                 |
| 40                  | MMIC decoupling | 33                | ± 20      | ±10, ±5, ±2 | Round or Square | 600                         | 400M107C330M                                | 400M107A330M                                 |
| 40                  | MMIC decoupling | 39                | ± 20      | ±10, ±5, ±2 | Round or Square | 600                         | 400M107C390M                                | 400M107A390M                                 |
| 40                  | MMIC decoupling | 47                | ± 20      | ±10, ±5, ±2 | Round or Square | 800                         | 400M108C470M                                | 400M108A470M                                 |
| 40                  | MMIC decoupling | 56                | ± 20      | ±10, ±5, ±2 | Round or Square | 800                         | 400M108C560M                                | 400M108A560M                                 |
| 40                  | MMIC decoupling | 68                | ± 20      | ±10, ±5, ±2 | Round or Square | 800                         | 400M108C680M                                | 400M108A680M                                 |
| 40                  | MMIC decoupling | 82                | ± 20      | ±10, ±5, ±2 | Round or Square | 1000                        | 400M110C820M                                | 400M110A820M                                 |
| 40                  | MMIC decoupling | 100               | ± 20      | ±10, ±5, ±2 | Round or Square | 1000                        | 400M110C101M                                | 400M110A101M                                 |
| 100                 | MMIC decoupling | 3.9               | ± 20      | ±10, ±5, ±2 | Round or Square | 400                         | 101M106C3R9M                                | 101M106A3R9M                                 |
| 100                 | MMIC decoupling | 4.7               | ± 20      | ±10, ±5, ±2 | Round or Square | 400                         | 101M106C4R7M                                | 101M106A4R7M                                 |
| 100                 | MMIC decoupling | 5.6               | ± 20      | ±10, ±5, ±2 | Round or Square | 400                         | 101M106C5R6M                                | 101M106A5R6M                                 |
| 100                 | MMIC decoupling | 6.8               | ± 20      | ±10, ±5, ±2 | Round or Square | 400                         | 101M106C6R8M                                | 101M106A6R8M                                 |
| 100                 | MMIC decoupling | 10                | ± 20      | ±10, ±5, ±2 | Round           | 600                         | 101M107C100M                                | -  |
| 100                 | MMIC decoupling | 10                | ± 20      | ±10, ±5, ±2 | Square          | 540                         |   | 101M104A100M                                 |
| 100                 | MMIC decoupling | 12                | ± 20      | ±10, ±5, ±2 | Round           | 600                         | 101M107C120M                                | -  |
| 100                 | MMIC decoupling | 12                | ± 20      | ±10, ±5, ±2 | Square          | 540                         |   | 101M104A120M                                 |
| 100                 | MMIC decoupling | 15                | ± 20      | ±10, ±5, ±2 | Round or Square | 600                         | 101M107C150M                                | 101M107A150M                                 |
| 100                 | MMIC decoupling | 22                | ± 20      | ±10, ±5, ±2 | Round or Square | 800                         | 101M108C220M                                | 101M108A220M                                 |
| 100                 | MMIC decoupling | 27                | ± 20      | ±10, ±5, ±2 | Round or Square | 800                         | 101M108C270M                                | 101M108A270M                                 |
| 100                 | MMIC decoupling | 33                | ± 20      | ±10, ±5, ±2 | Round or Square | 800                         | 101M108C330M                                | 101M108A330M                                 |
| 100                 | MMIC decoupling | 39                | ± 20      | ±10, ±5, ±2 | Round or Square | 800                         | 101M108C390M                                | 101M108A390M                                 |
| 200                 | MMIC decoupling | 0.22              | ± 20      | ±10         | Square          | 400                         | -   | 201M106A0R22M                                |
| 200                 | MMIC decoupling | 0.27              | ± 20      | ±10         | Square          | 400                         | -   | 201M106A0R27M                                |
| 200                 | MMIC decoupling | 0.33              | ± 20      | ±10         | Square          | 400                         | -   | 201M106A0R33M                                |
| 200                 | MMIC decoupling | 0.39              | ± 20      | ±10         | Square          | 400                         | -   | 201M106A0R39M                                |
| 200                 | MMIC decoupling | 0.47              | ± 20      | ±10         | Square          | 400                         | -   | 201M106A0R47M                                |
| 200                 | MMIC decoupling | 0.56              | ± 20      | ±10         | Square          | 400                         | -   | 201M106A0R56M                                |
| 200                 | MMIC decoupling | 0.68              | ± 20      | ±10         | Square          | 400                         | -   | 201M106A0R68M                                |
| 200                 | MMIC decoupling | 0.82              | ± 20      | ±10         | Square          | 400                         | -   | 201M106A0R82M                                |
| 200                 | MMIC decoupling | 1                 | ± 20      | ±10         | Square          | 400                         | -   | 201M106A1R0M                                 |
| 200                 | MMIC decoupling | 1.2               | ± 20      | ±10         | Square          | 400                         | -   | 201M106A1R2M                                 |
| 200                 | MMIC decoupling | 1.5               | ± 20      | ±10         | Square          | 400                         | -   | 201M106A1R5M                                 |
| 200                 | MMIC decoupling | 1.8               | ± 20      | ±10         | Square          | 400                         | -   | 201M106A1R8M                                 |
| 200                 | MMIC decoupling | 2.2               | ± 20      | ±10, ±5, ±2 | Round or Square | 400                         | 201M106C2R2M                                | 201M106A2R2M                                 |
| 200                 | MMIC decoupling | 2.7               | ± 20      | ±10, ±5, ±2 | Round or Square | 400                         | 201M106C2R7M                                | 201M106A2R7M                                 |
| 200                 | MMIC decoupling | 3.3               | ± 20      | ±10, ±5, ±2 | Round or Square | 400                         | 201M106C3R3M                                | 201M106A3R3M                                 |
| 200                 | MMIC decoupling | 3.9               | ± 20      | ±10, ±5, ±2 | Round           | 600                         | 201M107C3R9M                                | -  |
| 200                 | MMIC decoupling | 3.9               | ± 20      | ±10, ±5, ±2 | Square          | 540                         |   | 201M104A3R9M                                 |



## SINGLE PAD MOS CAPACITORS : SPACE & DEFENCE APPLICATIONS

| Voltage rating<br>V | Application     | Capacitance<br>pF | Tolerance |             | Pad type        | Dimension<br>per side<br>µm | Part Number<br>(Round pad)<br>20% tolerance | Part Number<br>(Square pad)<br>20% tolerance |
|---------------------|-----------------|-------------------|-----------|-------------|-----------------|-----------------------------|---|--|
|                     |                 |                   | Standard  | Options     |                 |                             |   |  |
|                     |                 |                   | %         |             |                 |                             |   |  |
| 200                 | MMIC decoupling | 4.7               | ± 20      | ±10, ±5, ±2 | Round           | 600                         | 201M107C4R7M                                | -  |
| 200                 | MMIC decoupling | 4.7               | ± 20      | ±10, ±5, ±2 | Square          | 540                         |   | 201M104A4R7M                                 |
| 200                 | MMIC decoupling | 5.6               | ± 20      | ±10, ±5, ±2 | Round           | 600                         | 201M107C5R6M                                | -  |
| 200                 | MMIC decoupling | 5.6               | ± 20      | ±10, ±5, ±2 | Square          | 540                         |   | 201M104A5R6M                                 |
| 200                 | MMIC decoupling | 6.8               | ± 20      | ±10, ±5, ±2 | Round           | 600                         | 201M107C6R8M                                | -  |
| 200                 | MMIC decoupling | 6.8               | ± 20      | ±10, ±5, ±2 | Square          | 540                         |   | 201M104A6R8M                                 |
| 200                 | MMIC decoupling | 8.2               | ± 20      | ±10, ±5, ±2 | Round or Square | 600                         | 201M107C8R2M                                | 201M107A8R2M                                 |
| 200                 | MMIC decoupling | 10                | ± 20      | ±10, ±5, ±2 | Round or Square | 800                         | 201M108C100M                                | 201M108A100M                                 |
| 200                 | MMIC decoupling | 12                | ± 20      | ±10, ±5, ±2 | Round or Square | 800                         | 201M108C120M                                | 201M108A120M                                 |
| 200                 | MMIC decoupling | 15                | ± 20      | ±10, ±5, ±2 | Round or Square | 800                         | 201M108C150M                                | 201M108A150M                                 |
| 200                 | MMIC decoupling | 18                | ± 20      | ±10, ±5, ±2 | Round or Square | 800                         | 201M108C180M                                | 201M108A180M                                 |
| 400                 | MMIC decoupling | 1                 | ± 20      | ±10         | Round           | 400                         | 401M106C1R0M                                | -  |
| 400                 | MMIC decoupling | 1.2               | ± 20      | ±10         | Round           | 400                         | 401M106C1R2M                                | -  |
| 400                 | MMIC decoupling | 1.5               | ± 20      | ±10         | Round           | 400                         | 401M106C1R5M                                | -  |
| 400                 | MMIC decoupling | 1.8               | ± 20      | ±10         | Round           | 400                         | 401M106C1R8M                                | -  |
| 500                 | MMIC decoupling | 0.22              | ± 20      | ±10         | Round           | 400                         | 501M106C0R22M                               | -  |
| 500                 | MMIC decoupling | 0.27              | ± 20      | ±10         | Round           | 400                         | 501M106C0R27M                               | -  |
| 500                 | MMIC decoupling | 0.33              | ± 20      | ±10         | Round           | 400                         | 501M106C0R33M                               | -  |
| 500                 | MMIC decoupling | 0.39              | ± 20      | ±10         | Round           | 400                         | 501M106C0R39M                               | -  |
| 500                 | MMIC decoupling | 0.47              | ± 20      | ±10         | Round           | 400                         | 501M106C0R47M                               | -  |
| 500                 | MMIC decoupling | 0.56              | ± 20      | ±10         | Round           | 400                         | 501M106C0R56M                               | -  |
| 500                 | MMIC decoupling | 0.68              | ± 20      | ±10         | Round           | 400                         | 501M106C0R68M                               | -  |
| 500                 | MMIC decoupling | 0.82              | ± 20      | ±10         | Round           | 400                         | 501M106C0R82M                               | -  |

## MULTI PADS MOS CAPACITORS

| Voltage rating<br>V | Application     | Lowest capacitance pad<br>pF | Number<br>of Steps | Min Capacitance value<br>pF | Max Capacitance value<br>pF | Tolerance<br>%      | Size Side<br>µm | Part Number<br>20% tolerance |
|---------------------|-----------------|------------------------------|--------------------|-----------------------------|-----------------------------|---------------------|-----------------|------------------------------|
| 40                  | MMIC decoupling | 10                           | 3                  | 10                          | 30                          | ± 20%. Option: ±10% | 550             | 400M114J100M                 |
| 40                  | MMIC decoupling | 10                           | 6                  | 10                          | 60                          | ± 20%. Option: ±10% | 750             | 400M113J100M                 |
| 100                 | MMIC decoupling | 0.5                          | 23                 | 0.5                         | 11.5                        | ± 20%. Option: ±10% | 500             | 101M111J0R5M                 |
| 100                 | MMIC decoupling | 0.8                          | 11                 | 0.8                         | 8.8                         | ± 20%. Option: ±10% | 500             | 101M112J0R8M                 |
| 200                 | MMIC decoupling | 0.25                         | 23                 | 0.25                        | 5.75                        | ± 20%. Option: ±10% | 500             | 201M111J0R25M                |
| 200                 | MMIC decoupling | 0.4                          | 11                 | 0.4                         | 4.4                         | ± 20%. Option: ±10% | 500             | 201M112J0R4M                 |
| 400                 | MMIC decoupling | 0.12                         | 23                 | 0.12                        | 2.76                        | ± 20%. Option: ±10% | 500             | 401M111J0R12M                |
| 400                 | MMIC decoupling | 0.2                          | 11                 | 0.2                         | 2.2                         | ± 20%. Option: ±10% | 500             | 401M112J0R2M                 |

# Silicon Pin Diodes

## Switching Pin Diodes

### SWITCHING PIN DIODES

| Breakdown Voltage<br>Vbr @ Ir = 10 $\mu$ A<br>V | Application          | Capacitance<br>@ F= 1 MHz<br>pF |               | Series Resistance<br>Rs<br>@ F= 120 MHz<br>$\Omega$ | Minority Carrier<br>Lifetime<br>$\tau$<br>If =10mA, Ir=6 mA | Package (1)           | Part Number |
|---|----------------------|---------------------------------|---------------|---|---|-----------------------|-------------|
|   |                      | Typ.                            | Max.          | Max.  |   |                       |             |
| Min.  |                      | @ Vr = 6V                       |               | @ If = 10 mA  | Typ. (ns)   |                       |             |
| 30  | Ultra Fast switching | 0.08                            | 0.12          | 1.8   | 20  | Die                   | EH50033-00  |
| 30  | Ultra Fast switching | 0.12                            | 0.17          | 1.5   | 20  | Die                   | EH50034-00  |
| 30  | Ultra Fast switching | 0.17                            | 0.23          | 1   | 25  | Die                   | EH50035-00  |
| 30  | Ultra Fast switching | 0.23                            | 0.4           | 0.9   | 30  | Die                   | EH50036-00  |
| 30  | Ultra Fast switching | 0.24                            | 0.29          | 1.5   | 20  | M208b                 | DH50034-03  |
| 30  | Ultra Fast switching | 0.26                            | 0.3           | 1.8   | 20  | F27d                  | DH50033-01  |
| 30  | Ultra Fast switching | 0.29                            | 0.35          | 1   | 25  | M208a                 | DH50035-02  |
| 30  | Ultra Fast switching | 0.4                             | 0.6           | 0.7   | 40  | Die                   | EH50037-00  |
| 30  | Ultra Fast switching | 0.52                            | 0.72          | 0.7   | 40  | M208a                 | DH50037-02  |
| 30  | Ultra Fast switching | -                               | 0.8pF @ Vr=0V | 1   | 40  | SOT323, serie diode   | DH50037-85N |
| 35  | Ultra Fast switching | 0.25                            | 0.3           |   | 150   | SOT23, single diode   | DH50051-51N |
| 35  | Ultra Fast switching | 0.25                            | 0.3           | 2.5 @ 5 mA  | 150   | SOT23, common cathode | DH50051-53N |
| 35  | Ultra Fast switching | 0.25                            | 0.3           | 2.5 @ 5 mA  | 150   | SOT23, common anode   | DH50051-54N |
| 35  | Ultra Fast switching | 0.25                            | 0.3           | 2.5 @ 5 mA  | 150   | SOT23, serie diode    | DH50051-55N |
| 35  | Ultra Fast switching | 0.25                            | 0.3           | 2.5 @ 5 mA  | 150   | SOT143                | DH50051-70N |
| 35  | Ultra Fast switching | -                               | 1pF @ Vr=0V   | 0.5   | 200   | SOT23, single diode   | DH50058-51N |
| 35  | Ultra Fast switching | -                               | 1pF @ Vr=0V   | 0.5   | 200   | SOT23, common cathode | DH50058-53N |
| 35  | Ultra Fast switching | -                               | 1pF @ Vr=0V   | 0.5   | 200   | SOT23, common anode   | DH50058-54N |
| 50  | Ultra Fast switching | 0.06                            | 0.08          | 1.6   | 30  | Die                   | EH50052-00  |
| 50  | Ultra Fast switching | 0.08                            | 0.12          | 1.4   | 30  | Die                   | EH50053-00  |
| 50  | Ultra Fast switching | 0.12                            | 0.17          | 1.1   | 35  | Die                   | EH50054-00  |
| 50  | Ultra Fast switching | 0.17                            | 0.23          | 1   | 40  | Die                   | EH50055-00  |
| 50  | Ultra Fast switching | 0.18                            | 0.2           | 1.6   | 30  | M208a                 | DH50052-02  |
| 50  | Ultra Fast switching | 0.23                            | 0.4           | 0.9   | 50  | Die                   | EH50056-00  |
| 50  | Ultra Fast switching | 0.24                            | 0.29          | 1.1   | 35  | M208b                 | DH50054-02  |
| 50  | Ultra Fast switching | 0.25                            | 0.35          | 1.5   | 200   | SOT23, single diode   | DH50053-51N |
| 50  | Ultra Fast switching | 0.25                            | 0.35          | 1.5   | 200   | SOT23, common cathode | DH50053-53N |
| 50  | Ultra Fast switching | 0.25                            | 0.35          | 1.5   | 200   | SOT23, common anode   | DH50053-54N |
| 50  | Ultra Fast switching | 0.25                            | 0.35          | 1.5   | 200   | SOT23, serie diode    | DH50053-55N |
| 50  | Ultra Fast switching | 0.29                            | 0.35          | 1   | 40  | M208c                 | DH50055-01  |
| 50  | Ultra Fast switching | 0.4                             | 0.6           | 0.7   | 60  | Die                   | EH50057-00  |
| 50  | Ultra Fast switching | 0.45                            | 0.7           | 0.7   | 60  | DFN-2L1, single diode | DH50057-90N |
| 50  | Ultra Fast switching | 0.52                            | 0.72          | 0.7   | 60  | M208a                 | DH50057-01  |
|   |                      | @ Vr = 50V                      |               | @ If = 50 mA  | Min ( $\mu$ s)  |                       |             |
| 50  | Fast switching       | 0.6                             | 0.7           | 0.9   | 1   | Melf, SMD4            | SQM1050N    |
| 50  | Fast switching       | 0.6                             | 0.7           | 1   | 1   | Melf, SMD4            | SQM2050N    |
| 50  | Fast switching       | 0.9                             | 1.2           | 0.75  | 2   | Melf, SMD4            | SQM1250N    |
| 50  | Fast switching       | 1                               | 1.2           | 0.35  | 1   | Melf, SMD4            | SQM2150N    |
| 50  | Fast switching       | 1.1                             | 1.7           | 0.6   | 3.5   | Melf, SMD6            | SQM1350N    |
| 50  | Fast switching       | 1.8                             | 2.5           | 0.75  | 5   | Melf, SMD8            | SQM1450N    |

(1): other package available on request. consult factory



**SWITCHING PIN DIODES**

| Breakdown Voltage<br>$V_{br} @ I_r = 10 \mu A$<br>V | Application          | Capacitance<br>@ F= 1 MHz<br>pF |      | Series Resistance<br>$R_s$<br>@ F= 120 MHz<br>$\Omega$ | Minority Carrier<br>Lifetime<br>$\tau_l$<br>If =10mA, Ir=6 mA | Package (1)           | Part Number |
|---|----------------------|---------------------------------|------|--|---|-----------------------|-------------|
|   |                      | Typ.                            | Max. | Max.   |   |                       |             |
|   |                      | @ $V_r = 6V$                    |      | @ $I_f = 10 mA$  | Typ. (ns)   |                       |             |
| 70  | Ultra Fast switching | 0.04                            | 0.06 | 2  | 50  | Die                   | EH50071-00  |
| 70  | Ultra Fast switching | 0.06                            | 0.08 | 1.7  | 50  | Die                   | EH50072-00  |
| 70  | Ultra Fast switching | 0.08                            | 0.12 | 1.6  | 60  | Die                   | EH50073-00  |
| 70  | Ultra Fast switching | 0.12                            | 0.17 | 1.4  | 60  | Die                   | EH50074-00  |
| 70  | Ultra Fast switching | 0.16                            | 0.18 | 2  | 50  | M208a                 | DH50071-06  |
| 70  | Ultra Fast switching | 0.17                            | 0.23 | 1  | 100   | Die                   | EH50075-00  |
| 70  | Ultra Fast switching | 0.23                            | 0.4  | 0.9  | 100   | Die                   | EH50076-00  |
| 70  | Ultra Fast switching | 0.24                            | 0.29 | 1.4  | 60  | M208b                 | DH50074-01  |
| 70  | Ultra Fast switching | 0.4                             | 0.6  | 0.7  | 150   | Die                   | EH50077-00  |
| 100   | Ultra Fast switching | 0.02                            | 0.03 | 2.5  | 60  | Die                   | EH50100-00  |
| 100   | Ultra Fast switching | 0.04                            | 0.06 | 1.9  | 150   | Die                   | EH50101-00  |
| 100   | Ultra Fast switching | 0.06                            | 0.08 | 1.7  | 150   | Die                   | EH50102-00  |
| 100   | Ultra Fast switching | 0.08                            | 0.12 | 1.4  | 200   | Die                   | EH50103-00  |
| 100   | Ultra Fast switching | 0.14                            | 0.18 | 1.9  | 150   | DFN-2L1, single diode | DH50101-90N |
| 100   | Ultra Fast switching | 0.12                            | 0.17 | 1.2  | 250   | Die                   | EH50104-00  |
| 200   | Ultra Fast switching | 0.13                            | 0.22 | 1.5  | 500   | DFN-2L1, single diode | DH50103-90N |
| 100   | Ultra Fast switching | 0.17                            | 0.23 | 1  | 300   | Die                   | EH50105-00  |
| 100   | Ultra Fast switching | 0.23                            | 0.4  | 0.8  | 400   | Die                   | EH50106-00  |
| 100   | Ultra Fast switching | 0.3                             | 0.35 | 1.2  | 250   | F27d                  | DH50104-01  |
| 100   | Ultra Fast switching | 0.4                             | 0.6  | 0.6  | 500   | Die                   | EH50107-00  |
| 100   | Ultra Fast switching | 0.62                            | 0.63 | 1.9  | 150   | BH194                 | DH50101-15  |
|   |                      | @ $V_r = 50V$                   |      | @ $I_f = 10 mA$  | Typ. (ns)   |                       |             |
| 100   | Ultra Fast switching | -                               | 0.35 | 3  | 500   | SOT23, single diode   | DH50103-51N |
| 100   | Ultra Fast switching | -                               | 0.35 | 3  | 500   | SOT23, common cathode | DH50103-53N |
| 100   | Ultra Fast switching | -                               | 0.35 | 3  | 500   | SOT23, common anode   | DH50103-54N |
| 100   | Ultra Fast switching | -                               | 1.2  | 0.6  | 1000  | SOT23, single diode   | DH50109-51N |
| 100   | Ultra Fast switching | -                               | 1.2  | 0.6  | 1000  | SOT23, common cathode | DH50109-53N |
| 100   | Ultra Fast switching | -                               | 1.2  | 0.6  | 1000  | SOT23, common anode   | DH50109-54N |
| 100   | Ultra Fast switching | -                               | 1.2  | 0.6  | 1000  | SOT23, serie diode    | DH50109-55N |
| 100   | Ultra Fast switching | -                               | 1.2  | 0.6  | 1000  | SOD323                | DH50109-60N |

(1): other package available on request. consult factory

# Silicon Pin Diodes

## Switching Pin Diodes

### SWITCHING PIN DIODES

| Breakdown Voltage<br>$V_{br}$ @ $I_r = 10 \mu A$<br>V | Application    | Capacitance<br>@ $F = 1$ MHz<br>pF |      | Series Resistance<br>$R_s$<br>@ $F = 120$ MHz<br>$\Omega$ | Minority Carrier<br>Lifetime<br>$\tau_l$<br>$I_f = 10 mA, I_r = 6 mA$ | Package (1)           | Part Number |
|---|----------------|------------------------------------|------|---|---|-----------------------|-------------|
|   |                | Typ.                               | Max. | Max.  |   |                       |             |
|   |                | @ $V_r = 50V$                      |      | @ $I_f = 10 mA$   | Typ. (ns)   |                       |             |
| 150   | Fast switching | 0.04                               | 0.06 | 2   | 200   | Die                   | EH50151-00  |
| 150   | Fast switching | 0.06                               | 0.08 | 1.7   | 230   | Die                   | EH50152-00  |
| 150   | Fast switching | 0.08                               | 0.12 | 1.5   | 300   | Die                   | EH50153-00  |
| 150   | Fast switching | 0.12                               | 0.17 | 1.4   | 500   | Die                   | EH50154-00  |
| 150   | Fast switching | 0.17                               | 0.23 | 1   | 550   | Die                   | DH50155-00  |
| 150   | Fast switching | 0.18                               | 0.2  | 1.7   | 230   | M208b                 | DH50152-01  |
| 150   | Fast switching | 0.2                                | 0.24 | 1.5   | 300   | M208a                 | DH50153-02  |
| 150   | Fast switching | 0.23                               | 0.4  | 0.8   | 800   | Die                   | EH50156-00  |
| 150   | Fast switching | 0.24                               | 0.29 | 1.4   | 500   | M208c                 | DH50154-02  |
| 150   | Fast switching | 0.29                               | 0.35 | 1   | 550   | M208b                 | DH50155-03  |
| 150   | Fast switching | 0.4                                | 0.6  | 0.6   | 950   | Die                   | EH50157-00  |
| 150   | Fast switching | 0.52                               | 0.72 | 0.6   | 950   | M208b                 | DH50157-01  |
| 150   | Fast switching | 0.64                               | 0.66 | 2   | 200   | BH198                 | DH50151-14  |
| 200   | Fast switching | 0.04                               | 0.06 | 2.3   | 300   | Die                   | EH50201-00  |
| 200   | Fast switching | 0.06                               | 0.08 | 2.1   | 400   | Die                   | EH50202-00  |
| 200   | Fast switching | 0.08                               | 0.12 | 1.5   | 500   | Die                   | EH50203-00  |
| 200   | Fast switching | 0.12                               | 0.17 | 1.3   | 650   | Die                   | EH50204-00  |
| 200   | Fast switching | 0.17                               | 0.23 | 1   | 800   | Die                   | EH50205-00  |
| 200   | Fast switching | 0.18                               | 0.2  | 2.1   | 400   | M208f                 | DH50202-01  |
| 200   | Fast switching | 0.20                               | 0.25 | 1.5   | 500   | DFN-2L1. single diode | DH50203-90N |
| 200   | Fast switching | 0.23                               | 0.4  | 0.8   | 950   | Die                   | EH50206-00  |
| 200   | Fast switching | 0.25                               | 0.35 | 3   | 500   | SOT23. single diode   | DH50203-51N |
| 200   | Fast switching | 0.25                               | 0.35 | 3   | 500   | SOT23. common cathode | DH50203-53N |
| 200   | Fast switching | 0.25                               | 0.35 | 3   | 500   | SOT23. common anode   | DH50203-54N |
| 200   | Fast switching | 0.25                               | 0.35 | 3   | 500   | SOT23. serie diode    | DH50203-55N |
| 200   | Fast switching | 0.25                               | 0.35 | 3   | 500   | SOD323                | DH50203-60N |
| 200   | Fast switching | 0.26                               | 0.3  | 1.5   | 500   | F27d                  | DH50203-01  |
| 200   | Fast switching | 0.29                               | 0.35 | 1   | 800   | M208f                 | DH50205-02  |
| 200   | Fast switching | 0.3                                | 0.35 | 1.3   | 650   | F27d                  | DH50204-01  |
| 200   | Fast switching | 0.4                                | 0.6  | 0.7   | 1050  | Die                   | EH50207-00  |
| 200   | Fast switching | 0.8                                | 1.1  | 0.6   | 1000  | DFN-2L1. single diode | DH50209-90N |
| 200   | Fast switching | 1pF max @ 100V                     |      | 0.5   | 1500  | Die                   | EH50209-01  |
| 200   | Fast switching | 1                                  | 1.15 | 3   | 500   | F27d                  | DH50209-01  |
| 200   | Fast switching | 1                                  | 1.2  | 0.6   | 1000  | SOT23. serie diode    | DH50209-55N |
|   |                | @ $V_r = 50V$                      |      | @ $I_f = 50 mA$   | Min ( $\mu s$ )   |                       |             |
| 200   | Fast switching | 1                                  | 1.2  | 0.35  | 1   | Melf. SMD4            | SQM1150N    |
| 200   | Fast switching | 1                                  | 1.2  | 0.25  | 1   | Melf. SMD4            | DH50209-06N |

(1): other package available on request. consult factory



**SWITCHING PIN DIODES**

| Breakdown Voltage<br>Vbr @ Ir = 10 $\mu$ A<br>V | Application          | Capacitance<br>@ F= 1 MHz<br>pF |       | Serie Resistance<br>Rs<br>@ F= 120 MHz<br>$\Omega$ | Minority Carrier<br>Lifetime<br>$\tau$<br>If =10mA, Ir=6 mA | Package (1)           | Part Number |
|---|----------------------|---------------------------------|-------|--|---|-----------------------|-------------|
|   |                      | Typ.                            | Max.  | Max.   |   |                       |             |
| Min.  |                      | @ Vr = 50V                      |       | @ If = 10 mA                                       | Typ. (ns)   |                       |             |
| 250   | Fast switching       | 0.04                            | 0.06  | 2.4  | 330   | Die                   | EH50251-00  |
| 250   | Fast switching       | 0.06                            | 0.08  | 2.2  | 500   | Die                   | EH50252-00  |
| 250   | Fast switching       | 0.08                            | 0.12  | 2  | 900   | Die                   | EH50253-00  |
| 250   | Fast switching       | 0.12                            | 0.17  | 1.4  | 900   | Die                   | EH50254-00  |
| 250   | Fast switching       | 0.16                            | 0.22  | 2.4  | 330   | M208b                 | DH50251-02  |
| 250   | Fast switching       | 0.17                            | 0.23  | 0.9  | 1000  | Die                   | EH50255-00  |
| 250   | Fast switching       | 0.23                            | 0.4   | 0.8  | 1150  | Die                   | EH50256-00  |
| 250   | Fast switching       | 0.29                            | 0.35  | 0.9  | 1000  | M208a                 | DH50255-04  |
| 250   | Fast switching       | 0.3                             | 0.35  | 1.4  | 900   | F27d                  | DH50254-02  |
| 250   | Fast switching       | 0.35                            | 0.41  | 0.9  | 1000  | F27d                  | DH50255-01  |
| 250   | Fast switching       | 0.41                            | 0.58  | 0.8  | 1150  | F27d                  | DH50256-02  |
| 250   | Fast switching       | 0.43                            | 0.6   | 0.8  | 1150  | BH142a                | DH50256-01  |
| 400   | Fast switching       | 0.038                           | 0.057 | Rs(20mA) <3  | <4000   | Die                   | EH50250-07  |
| 400   | Fast switching       | 0.04                            | 0.06  | 3  | 900   | Die                   | EH50401-01  |
| 400   | High Power Switching | 0.45                            | 0.6   | 2  | 2000  | SOT23. single diode   | DH80051-51N |
| 400   | High Power Switching | 0.14                            | 0.16  | 3  | 700   | DFN-2L1. single diode | DH50401-90N |
|   |                      | @ Vr = 50V                      |       | @ If = 100 mA                                      | Min ( $\mu$ s)  |                       |             |
| 450   | High Power Switching | 0.045                           | 0.06  | 2  | 1.5   | Die                   | EH80041-00  |
| 450   | High Power Switching | 0.08                            | 0.12  | 1.2  | 2   | Die                   | EH80042-00  |
| 450   | High Power Switching | 0.1                             | 0.16  | 2  | 1.5   | DFN-2L1. single diode | DH80041-90N |
| 450   | High Power Switching | 0.1                             | 0.16  | 2  | 1.5   | DFN-3L1. serie diode  | DH80041-93N |
| 450   | High Power Switching | 0.15                            | 0.2   | 2  | 1.5   | M208b                 | DH80041-03  |

(1): other package available on request. consult factory

# Silicon Pin Diodes

## Switching Pin Diodes

### SWITCHING PIN DIODES

| Breakdown Voltage<br>V <sub>br</sub> @ I <sub>r</sub> = 10 μA<br>V | Application               | Capacitance<br>@ F= 1 MHz<br>pF |      | Series Resistance<br>R <sub>s</sub><br>@ F= 120 MHz<br>Ω | Minority Carrier<br>Lifetime<br>τ <sub>l</sub><br>If =10mA, Ir=6 mA | Package (1)           | Part Number |
|--|---------------------------|---------------------------------|------|--|---|-----------------------|-------------|
|  |                           | Typ.                            | Max. | Max.   |   |                       |             |
| Min.   |                           | @ V <sub>r</sub> = 50V          |      | @ I <sub>F</sub> =200mA                                  | Min (μs)  |                       |             |
| 500  | High Power Switching      | 0.15                            | 0.2  | 0.65   | 1.1   | Die                   | EH80050-00  |
| 500  | High Power Switching      | 0.3                             | 0.4  | 0.55   | 1.5   | Die                   | EH80051-00  |
| 500  | High Power Switching      | 0.33                            | 0.38 | 0.65   | 1.1   | F27d                  | DH80050-01  |
| 500  | MRI: High Power Switching | 0.4                             | 0.45 | 0.65   | 1.1   | Melf. SMD4AM          | DH80050-40N |
| 500  | High Power Switching      | 0.4                             | 0.45 | 0.65   | 1.1   | Melf. SMD4            | DH80050-06N |
| 500  | High Power Switching      |                                 | 0.4  | 0.85   | 1.1   | Melf. SMD4            | DH80050-07N |
| 500  | High Power Switching      | 0.45                            | 0.55 | 0.55   | 1.5   | BH202N                | DH80051-03  |
| 500  | High Power Switching      | 0.55                            | 0.65 | 0.55   | 1.5   | BH35                  | DH80051-05  |
| 500  | MRI: High Power Switching | 0.55                            | 0.65 | 0.55   | 1.5   | Melf. SMD4AM          | DH80051-40N |
| 500  | High Power Switching      | 0.55                            | 0.65 | 0.55   | 1.5   | Melf. SMD4            | DH80051-06N |
| 500  | High Power Switching      | 0.6                             | 0.7  | 0.3  | 2   | Die                   | EH80052-00  |
| 500  | High Power Switching      | 0.78                            | 0.88 | 0.3  | 2   | F27d                  | DH80052-01  |
| 500  | High Power Switching      | 0.8                             | 0.9  | 0.25   | 2.5   | Die                   | EH80053-00  |
| 500  | MRI: High Power Switching | 0.85                            | 1.05 | 0.35   | 2.1   | Melf. SMD4AM          | DH80052-40N |
| 500  | High Power Switching      | 0.85                            | 1.05 | 0.35   | 2.1   | Melf. SMD4            | DH80052-06N |
| 500  | High Power Switching      | 0.98                            | 1.08 | 0.25   | 2.5   | F27d                  | DH80053-01  |
| 500  | High Power Switching      | 1                               | 1.1  | 0.25   | 2.5   | BH301                 | DH80053-02  |
| 500  | MRI: High Power Switching | 1.05                            | 1.2  | 0.3  | 2.5   | Melf. SMD4AM          | DH80053-40N |
| 500  | High Power Switching      | 1.05                            | 1.2  | 0.3  | 2.5   | Melf. SMD4            | DH80053-06N |
| 500  | High Power Switching      | 1.2                             | 1.3  | 0.22   | 3   | Die                   | EH80055-00  |
| 500  | MRI: High Power Switching | 1.25                            | 1.4  | 0.22   | 3   | DFN-2L2. single diode | DH80055-94N |
| 500  | High Power Switching      | 1.25                            | 1.35 | 0.27   | 3   | Melf. SMD4            | DH80054-06N |
| 500  | MRI: High Power Switching | 1.25                            | 1.35 | 0.27   | 3   | Melf. SMD4AM          | DH80054-40N |
| 500  | High Power Switching      | 1.35                            | 1.45 | 0.25   | 3.5   | BH202N                | DH80055-03  |
| 500  | High Power Switching      | 1.38                            | 1.48 | 0.25   | 3.5   | F27d                  | DH80055-01  |
| 500  | MRI: High Power Switching | 1.45                            | 1.55 | 0.25   | 3.5   | Melf. SMD4AM          | DH80055-40N |
| 500  | High Power Switching      | 1.45                            | 1.55 | 0.25   | 3.5   | Melf. SMD6            | DH80055-20N |
| 500  | High Power Switching      | 1.45                            | 1.55 | 0.25   | 3.5   | Melf. SMD4            | DH80055-06N |
| 800  | High Power Switching      | 0.15                            | 0.35 | 0.7  | 2   | Die                   | EH80080-00  |
| 800  | High Power Switching      | 0.3                             | 0.5  | 0.7  | 2   | BMH76                 | DH80080-01  |
| 800  | High Power Switching      | 0.3                             | 0.5  | 0.7  | 2   | BH202N                | DH80080-02  |
| 800  | High Power Switching      | 0.33                            | 0.53 | 0.7  | 2   | F27d                  | DH80080-00  |
| 800  | High Power Switching      | 0.8                             | 0.9  | 0.3  | 3   | Die                   | EH80083-00  |
| 800  | MRI: High Power Switching | 0.9                             | 1.00 | 0.35   | 3   | Melf. SMD4AM          | DH80082-40N |
| 800  | High Power Switching      | 0.9                             | 1.00 | 0.35   | 3   | Melf. SMD4            | DH80082-06N |
| 800  | High Power Switching      | 1.0                             | 1.1  | 0.3  | 3   | BH301                 | DH80083-02  |
| 800  | High Power Switching      | 1.2                             | 1.3  | 0.3  | 3   | BH141                 | DH80083-05  |
| 800  | High Power Switching      | 1.4                             | 1.7  | 0.28   | 5   | Die                   | EH80086-00  |
| 900  | MRI: High Power Switching | 1.25                            | 2    | 0.3  | 7   | BH158AM               | DH80106-11N |

(1): other package available on request. consult factory



## SWITCHING PIN DIODES

| Breakdown Voltage<br>Vbr @ Ir = 10 $\mu$ A<br>V | Application               | Capacitance<br>@ F= 1 MHz<br>pF |      | Series Resistance<br>Rs<br>@ F= 120 MHz<br>$\Omega$ | Minority Carrier<br>Lifetime<br>$\tau$<br>If =10mA, Ir=6 mA | Package (1)           | Part Number |
|---|---------------------------|---------------------------------|------|---|---|-----------------------|-------------|
|   |                           | Typ.                            | Max. | Max.  |   |                       |             |
| Max.  |                           | @ Vr = 50V                      |      | @ IF=200mA  | Min ( $\mu$ s)  |                       |             |
| 1000  | High Power Switching      | 0.3                             | 0.4  | 0.6   | 3.00  | Die                   | EH80100-00  |
| 1000  | MRI: High Power Switching | 0.35                            | 0.5  | 0.6   | 3.00  | DFN-2L2. single diode | DH80100-94N |
| 1000  | High Power Switching      | 0.5                             | 0.6  | 0.6   | 3.00  | BH142a                | DH80100-04  |
| 1000  | MRI: High Power Switching | 0.55                            | 0.65 | 0.6   | 3.00  | Melf. SMD4AM          | DH80100-40N |
| 1000  | High Power Switching      | 0.55                            | 0.65 | 0.6   | 3.00  | Melf. SMD4            | DH80100-06N |
| 1000  | High Power Switching      | 0.6                             | 0.75 | 0.35  | 4.00  | Die                   | EH80102-00  |
| 1000  | MRI: High Power Switching | 0.65                            | 0.85 | 0.35  | 4.00  | DFN-2L2. single diode | DH80102-94N |
| 1000  | High Power Switching      | 0.75                            | 0.9  | 0.35  | 4.00  | BH202N                | DH80102-03  |
| 1000  | High Power Switching      | 0.8                             | 0.95 | 0.35  | 4.00  | BH301                 | DH80102-02  |
| 1000  | High Power Switching      | 0.85                            | 1.05 | 0.35  | 4.00  | Melf. SMD8            | DH80102-24N |
| 1000  | MRI: High Power Switching | 0.85                            | 1.0  | 0.35  | 4.00  | Melf. SMD8AM          | DH80102-44N |
| 1000  | High Power Switching      | 0.85                            | 1.0  | 0.35  | 4.00  | Melf. SMD6            | DH80102-20N |
| 1000  | MRI: High Power Switching | 1.25                            | 2    | 0.3   | 7   | Melf. SMD8AM          | DH80106-44N |
| 1000  | High Power Switching      | 1.25                            | 2    | 0.3   | 7   | Melf. SMD8            | DH80106-24N |
| 1000  | High Power Switching      | 1.4                             | 1.7  | 0.3   | 7.00  | Die                   | EH80106-00  |
| 1000  | High Power Switching      | 1.55                            | 1.85 | 0.3   | 7.00  | BH202N                | DH80106-03  |
| 1000  | High Power Switching      | 1.8                             | 2.1  | 0.3   | 7.00  | BH141                 | DH80106-01  |
|   |                           | @ Vr = 100V                     |      | @ IF=300mA  | Min ( $\mu$ s)  |                       |             |
| 1200  | High Power Switching      | 0.3                             | 0.4  | 0.55  | 6   | Die                   | EH80120-00  |
| 1200  | High Power Switching      | 0.5                             | 0.6  | 0.55  | 6   | BH301                 | DH80120-02  |
| 1200  | High Power Switching      | 0.45                            | 0.55 | 0.55  | 6   | BH202N                | DH80120-03  |
| 1200  | High Power Switching      | 1                               | 1.2  | 0.35  | 10  | Die                   | EH80124-00  |
| 1200  | High Power Switching      | 1.25                            | 1.45 | 0.35  | 10  | BH35                  | DH80124-04  |
| 1200  | High Power Switching      | 1.4                             | 1.6  | 0.35  | 10  | BH141                 | DH80124-01  |
| 1200  | High Power Switching      | 1.4                             | 1.7  | 0.3   | 12  | Die                   | EH80126-00  |
| 1200  | High Power Switching      | 2                               | 2.3  | 0.25  | 15  | Die                   | EH80129-00  |
| 1200  | High Power Switching      | 2.4                             | 2.7  | 0.25  | 15  | BH141                 | DH80129-01  |
| 1500  | High Power Switching      | 1                               | 1.2  | 0.35  | 10  | Die                   | EH80154-00  |
| 1500  | High Power Switching      | 1.4                             | 1.6  | 0.35  | 10  | BH300                 | DH80154-02  |
| 1500  | High Power Switching      | 2                               | 2.3  | 0.25  | 15  | Die                   | EH80159-00  |
| 1500  | High Power Switching      | 2.4                             | 2.7  | 0.25  | 15  | BH141                 | DH80159-01  |

(1): other package available on request. consult factory



# Silicon Pin Diodes

Switching Pin Diodes  
Attenuator Pin Diodes  
Hyperabrupt Tuning Varactors

## SWITCHING PIN DIODES

| Breakdown Voltage<br>$V_{br}$ @ $I_r = 10 \mu A$<br>V | Application          | Capacitance<br>@ $F = 1$ MHz<br>pF |      | Series Resistance<br>$R_s$<br>@ $F = 120$ MHz<br>$\Omega$ | Minority Carrier<br>Lifetime<br>$\tau_l$<br>$I_f = 10 mA, I_r = 6 mA$ | Package (1) | Part Number |
|---|----------------------|------------------------------------|------|---|---|-------------|-------------|
|   |                      | Typ.                               | Max. | Max.  |   |             |             |
| Min.  |                      | @ $V_r = 200V$                     |      | @ $I_f = 300 mA$  | Min ( $\mu s$ )   |             |             |
| 1800  | High Power Switching | 0.6                                | 0.8  | 0.5   | 12  | Die         | EH80182-00  |
| 1800  | High Power Switching | 0.85                               | 1.05 | 0.5   | 12  | BH35        | DH80182-04  |
| 1800  | High Power Switching | 1.00                               | 1.2  | 0.5   | 12  | BH141       | DH80182-01  |
| 1800  | High Power Switching | 2                                  | 2.4  | 0.3   | 18  | Die         | EH80189-00  |
| 2000  | High Power Switching | 1                                  | 1.3  | 0.4   | 14  | Die         | EH80204-00  |
| 2000  | High Power Switching | 1.4                                | 1.7  | 0.4   | 14  | BH300       | DH80204-02  |
| 2000  | High Power Switching | 1.4                                | 1.7  | 0.4   | 14  | BH141       | DH80204-01  |
| 2000  | High Power Switching | 1.4                                | 1.7  | 0.4   | 14  | BH158       | DH80204-07  |
| 2000  | High Power Switching | 2                                  | 2.4  | 0.3   | 18  | Die         | EH80209-00  |
| 2000  | High Power Switching | 2.4                                | 2.8  | 0.3   | 18  | BH300       | DH80209-02  |
| 2000  | High Power Switching | 2.4                                | 2.8  | 0.3   | 18  | BH141       | DH80209-01  |
| 2000  | High Power Switching | 3                                  | 3.4  | 0.15  | 25  | Die         | EH80210-00  |
| 2000  | High Power Switching | 3.4                                | 3.8  | 0.15  | 25  | BH300       | DH80210-02  |
| 2000  | High Power Switching | 3.4                                | 3.8  | 0.15  | 25  | BH200a      | DH80210-03  |
| 2000  | High Power Switching | 3.4                                | 3.8  | 0.15  | 25  | BH303       | DH80210-04  |
|   |                      | @ $V_r = 200V$                     |      | @ $I_f = 500 mA$  | Min ( $\mu s$ )   |             |             |
| 2800  | High Power Switching | 1.9                                | 2.5  | 0.25  | 48  | BH158       | DH80289-01  |
| 2800  | High Power Switching | 1.9                                | 2.5  | 0.25  | 48  | BH141       | DH80289-02  |

(1): other package available on request. consult factory (2) :  $I_f = 2 mA, I_r = 5 mA$

## ATTENUATOR PIN DIODES

| Breakdown Voltage<br>$V_{br}$ @ $I_r = 10 \mu A$<br>V | Application     | Capacitance<br>@ $F = 1$ MHz. @ 50V<br>pF |      | Series Resistance. $R_s$ @ $F = 120$ MHz<br>$\Omega$ |      |              |      |               |      | Minority Carrier<br>Lifetime<br>$I_f = 10 mA,$<br>$I_r = 6 mA$ | Package (1)                       | Part Number     |
|---|-----------------|---|------|--|------|--------------|------|---------------|------|--|-----------------------------------|-----------------|
|   |                 | Typ.                                      | Max. | $I_f = 0.1 mA$                                       |      | $I_f = 1 mA$ |      | $I_f = 10 mA$ |      |  |                                   |                 |
|   |                 |   |      | Min.   | Max. | Min.         | Max. | Min.          | Max. | Min.   | Max.                              | $\mu s$         |
| 100   | Attenuator. AGC | .005                                      | 0.10 | 300  | 700  | 50           | 100  | 6.0           | 12.5 | 2.5  | Die                               | EH40141-00      |
| 100   | Attenuator. AGC | 0.10                                      | 0.30 | 150  | 400  | 25           | 50   | 3.0           | 7.0  | 5.0  | Die                               | EH40144-00      |
| 100   | Attenuator. AGC | 0.10                                      | 0.30 | 300  | 700  | 50           | 100  | 6.0           | 12.5 | 7.0  | Die                               | EH40225-00      |
| 100   | Attenuator. AGC | 0.17                                      | 0.22 | 300  | 700  | 50           | 100  | 6.0           | 12.5 | 2.5  | M208b                             | DH40141-01      |
| 100   | Attenuator. AGC | 0.22                                      | 0.42 | 150  | 400  | 25           | 50   | 3.0           | 7.0  | 5.0  | M208a                             | DH40144-02      |
| 100   | Attenuator. AGC | 0.25                                      | 0.35 | 300  | 700  | 50           | 100  | 6.0           | 12.5 | 2.5  | SOT23. single diode               | DH40141-51N     |
| 100   | Attenuator. AGC | 0.25                                      | 0.35 | 300  | 700  | 50           | 100  | 6.0           | 12.5 | 2.5  | SOT23. common cathode             | DH40141-53N     |
| 100   | Attenuator. AGC | 0.25                                      | 0.35 | 300  | 700  | 50           | 100  | 6.0           | 12.5 | 2.5  | SOT23. common anode               | DH40141-54N     |
| 100   | Attenuator. AGC | 0.25                                      | 0.35 | 300  | 700  | 50           | 100  | 6.0           | 12.5 | 2.5  | SOT23. serie diode                | DH40141-55N     |
| 100   | Attenuator. AGC | 0.25                                      | 0.35 | 300  | 700  | 50           | 100  | 6.0           | 12.5 | 2.5  | SOT323. Single diode. dual output | DH40141-87N (*) |
| 100   | Attenuator. AGC | 0.30                                      | 0.55 | 150  | 400  | 25           | 50   | 3.0           | 7    | 5.0  | SOT23. single diode               | DH40144-51N     |
| 100   | Attenuator. AGC | 0.30                                      | 0.55 | 150  | 400  | 25           | 50   | 3.0           | 7    | 5.0  | SOT23. common cathode             | DH40144-53N     |
| 100   | Attenuator. AGC | 0.30                                      | 0.55 | 150  | 400  | 25           | 50   | 3.0           | 7    | 5.0  | SOT23. serie diode                | DH40144-55N     |
| 100   | Attenuator. AGC | 0.30                                      | 0.55 | 300  | 700  | 50           | 100  | 6.0           | 12.5 | 7.0  | SOT23. single diode               | DH40225-51N     |

(1): other package available on request. consult factory



**ATTENUATOR PIN DIODES**

| Breakdown Voltage<br>Vbr @ Ir = 10 μA<br>V | Application     | Capacitance<br>@ F = 1 MHz. @ 50V<br>pF |      | Serie Resistance. Rs @ F = 120 MHz<br>Ω |      |           |      |            |      | Minority Carrier Lifetime<br>If = 10 mA.<br>If = 6 mA<br>μs | Package (1)           | Part Number |
|--|-----------------|---|------|---|------|-----------|------|------------|------|---|-----------------------|-------------|
|  |                 |   |      | If = 0.1 mA                             |      | If = 1 mA |      | If = 10 mA |      |   |                       |             |
|  |                 | Typ.                                    | Typ. | Max.                                    | Min. | Max.      | Min. | Max.       | Min. | Max.  |                       |             |
| 100  | Attenuator. AGC | 0.30                                    | 0.55 | 300                                     | 700  | 50        | 100  | 6.0        | 12.5 | 7.0   | SOT23. common cathode | DH40225-53N |
| 100  | Attenuator. AGC | 0.30                                    | 0.55 | 300                                     | 700  | 50        | 100  | 6.0        | 12.5 | 7.0   | SOT23. serie diode    | DH40225-55N |
| 100  | Attenuator. AGC | 0.30                                    | 0.5  | 300                                     | 650  | 50        | 80   | 6          | 11   | 7.0   | SOT143                | DH40226-72N |
| 100  | Attenuator. AGC | 0.30                                    | 0.5  | 300                                     | 650  | 50        | 80   | 6          | 11   | 7.0   | SOT23. single diode   | DH40226-51N |

(\*): DH40141 - 87N: Rs at 100mA < 3Ω

(1): other package available on request. consult factory

**HYPERABRUPT TUNING VARACTORS**

| Breakdown Voltage<br>Vbr @ Ir = 10 μA<br>V | Application         | Capacitance<br>@ F=1MHz<br>pF |         |          |          | Tuning Ratio<br>@ F=1MHz<br>Ct1V / Ct12V |              | Figure of Merit<br>@ F = 50 MHz.<br>Vr=4V | Package (1)           | Part Number |
|--|---------------------|-------------------------------|---------|----------|----------|--|--------------|---|-----------------------|-------------|
|  |                     | Vr = 1V                       | Vr = 4V | Vr = 12V | Vr = 20V | Ct1V / Ct12V                             | Ct1V / Ct20V |   |                       |             |
|  |                     | Typ.                          | @ ±20%  | Typ.     | Typ.     | Typ.                                     | Typ.         | Typ.                                      |                       |             |
| 20V  | VCO. Tunable filter | 2.3                           | 1.0     | 0.4      | 0.3      | 5.5                                      | 7.3          | 2200                                      | Die                   | EH76010-00  |
| 20V  | VCO. Tunable filter | 2.4                           | 1.1     | 0.5      | 0.4      | 4.7                                      | 5.8          | 2200                                      | M208a                 | DH76010-01  |
| 20V  | VCO. Tunable filter | 2.6                           | 1.3     | 0.7      | 0.6      | 4.1                                      | 4.9          | 2200                                      | SOT23. single diode   | DH76010-51N |
| 20V  | VCO. Tunable filter | 2.6                           | 1.3     | 0.7      | 0.6      | 4.1                                      | 4.9          | 2200                                      | SOT23. common cathode | DH76010-53N |
| 20V  | VCO. Tunable filter | 2.6                           | 1.3     | 0.7      | 0.6      | 4.1                                      | 4.9          | 2200                                      | SOD323                | DH76010-60N |
| 20V  | VCO. Tunable filter | 3.4                           | 1.5     | 0.6      | 0.5      | 5.5                                      | 6.6          | 2000                                      | Die                   | EH76015-00  |
| 20V  | VCO. Tunable filter | 3.5                           | 1.6     | 0.7      | 0.6      | 4.9                                      | 5.7          | 2000                                      | M208a                 | DH76015-01  |
| 20V  | VCO. Tunable filter | 3.6                           | 1.7     | 0.8      | 0.7      | 4.5                                      | 5.1          | 2000                                      | F27d                  | DH76015-02  |
| 20V  | VCO. Tunable filter | 3.7                           | 1.8     | 0.9      | 0.8      | 4.4                                      | 5.4          | 2000                                      | SOT23. single diode   | DH76015-51N |
| 20V  | VCO. Tunable filter | 3.7                           | 1.8     | 0.9      | 0.8      | 4.4                                      | 5.4          | 2000                                      | SOT23. common cathode | DH76015-53N |
| 20V  | VCO. Tunable filter | 3.7                           | 1.8     | 0.9      | 0.8      | 4.4                                      | 5.4          | 2000                                      | SOD323                | DH76015-60N |
| 20V  | VCO. Tunable filter | 5.0                           | 2.2     | 0.9      | 0.7      | 5.5                                      | 7.0          | 1700                                      | Die                   | EH76022-00  |
| 20V  | VCO. Tunable filter | 5.1                           | 2.3     | 1.0      | 0.8      | 5.1                                      | 6.4          | 1700                                      | BH15                  | DH76022-10  |
| 20V  | VCO. Tunable filter | 5.1                           | 2.3     | 1.0      | 0.8      | 5.0                                      | 6.2          | 1700                                      | M208a                 | DH76022-02  |
| 20V  | VCO. Tunable filter | 5.3                           | 2.5     | 1.2      | 1.0      | 4.7                                      | 5.8          | 1700                                      | SOT23. single diode   | DH76022-51N |
| 20V  | VCO. Tunable filter | 5.3                           | 2.5     | 1.2      | 1.0      | 4.7                                      | 5.8          | 1700                                      | SOT23. common cathode | DH76022-53N |
| 20V  | VCO. Tunable filter | 5.3                           | 2.5     | 1.2      | 1.0      | 4.7                                      | 5.8          | 1700                                      | SOD323                | DH76022-60N |
| 20V  | VCO. Tunable filter | 7.5                           | 3.3     | 1.4      | 1.1      | 5.3                                      | 6.7          | 1400                                      | Die                   | EH76033-00  |
| 20V  | VCO. Tunable filter | 7.6                           | 3.4     | 1.5      | 1.2      | 5.0                                      | 6.2          | 1400                                      | M208b                 | DH76033-01  |
| 20V  | VCO. Tunable filter | 7.8                           | 3.6     | 1.7      | 1.4      | 4.9                                      | 6.1          | 1400                                      | SOT23. single diode   | DH76033-51N |
| 20V  | VCO. Tunable filter | 7.8                           | 3.6     | 1.7      | 1.4      | 4.9                                      | 6.1          | 1400                                      | SOT23. common cathode | DH76033-53N |
| 20V  | VCO. Tunable filter | 7.8                           | 3.6     | 1.7      | 1.4      | 4.9                                      | 6.1          | 1400                                      | SOD323                | DH76033-60N |
| 20V  | VCO. Tunable filter | 7.8                           | 3.6     | 1.7      | 1.4      | 4.9                                      | 6.1          | 1400                                      | SOT143                | DH76033-70N |
| 20V  | VCO. Tunable filter | 10.8                          | 4.7     | 2.0      | 1.5      | 5.4                                      | 7.1          | 1000                                      | Die                   | EH76047-00  |
| 20V  | VCO. Tunable filter | 10.9                          | 4.8     | 2.1      | 1.6      | 5.2                                      | 6.8          | 1000                                      | M208b                 | DH76047-02  |
| 20V  | VCO. Tunable filter | 11.1                          | 5.0     | 2.3      | 1.8      | 5.0                                      | 6.4          | 1000                                      | SOT23. single diode   | DH76047-51N |
| 20V  | VCO. Tunable filter | 11.1                          | 5.0     | 2.3      | 1.8      | 5.0                                      | 6.4          | 1000                                      | SOT23. common cathode | DH76047-53N |

(1): other package available on request. consult factory

# Silicon Pin Diodes

Hyperabrupt Tuning Varactors  
Abrupt Tuning Varactors

## HYPERABRUPT TUNING VARACTORS

| Breakdown Voltage<br>Vbr @ Ir = 10 µA | Application         | Capacitance<br>@ F=1MHz |         |          |          | Tuning Ratio<br>@ F=1MHz |              | Figure of Merit<br>@ F = 50 MHz.<br>Vr=4V | Package (1)           | Part Number |
|---------------------------------------|---------------------|-------------------------|---------|----------|----------|--------------------------|--------------|---|-----------------------|-------------|
|                                       |                     | pF                      |         |          |          | Ct1V / Ct20V             |              |   |                       |             |
|                                       |                     | Vr = 1V                 | Vr = 4V | Vr = 12V | Vr = 20V | Ct1V / Ct12V             | Ct1V / Ct20V |   |                       |             |
| V                                     |                     | Typ.                    | @ ±20%  | Typ.     | Typ.     | Typ.                     | Typ.         | Typ.                                      |                       |             |
| 20V                                   | VCO. Tunable filter | 11.1                    | 5.0     | 2.3      | 1.8      | 5.0                      | 6.4          | 1000                                      | SOD323                | DH76047-60N |
| 20V                                   | VCO. Tunable filter | 15.8                    | 6.7     | 2.8      | 2.2      | 5.6                      | 7.1          | 700                                       | Die                   | EH76068-00  |
| 20V                                   | VCO. Tunable filter | 15.9                    | 6.8     | 2.9      | 2.3      | 5.5                      | 6.9          | 700                                       | M208a                 | DH76068-02  |
| 20V                                   | VCO. Tunable filter | 16.1                    | 7.0     | 3.1      | 2.5      | 5.1                      | 6.5          | 700                                       | SOT23. single diode   | DH76068-51N |
| 20V                                   | VCO. Tunable filter | 16.1                    | 7.0     | 3.1      | 2.5      | 5.1                      | 6.5          | 700                                       | SOT23. common cathode | DH76068-53N |
| 20V                                   | VCO. Tunable filter | 16.1                    | 7.0     | 3.1      | 2.5      | 5.1                      | 6.5          | 700                                       | SOD323                | DH76068-60N |
| 20V                                   | VCO. Tunable filter | 22.8                    | 10.0    | 4.3      | 3.3      | 5.3                      | 6.9          | 400                                       | Die                   | EH76100-00  |
| 20V                                   | VCO. Tunable filter | 23.1                    | 10.3    | 4.6      | 3.6      | 5.2                      | 6.7          | 400                                       | SOT23. single diode   | DH76100-51N |
| 20V                                   | VCO. Tunable filter | 23.1                    | 10.3    | 4.6      | 3.6      | 5.2                      | 6.7          | 400                                       | SOT23. common cathode | DH76100-53N |
| 20V                                   | VCO. Tunable filter | 23.1                    | 10.3    | 4.6      | 3.6      | 5.2                      | 6.7          | 400                                       | SOD323                | DH76100-60N |
| 20V                                   | VCO. Tunable filter | 24.0                    | 10.2    | 4.4      | 3.4      | 5.5                      | 7.1          | 400                                       | M208a                 | DH76100-02  |
| 20V                                   | VCO. Tunable filter | 33.8                    | 15.0    | 6.4      | 4.9      | 5.3                      | 6.9          | 140                                       | Die                   | EH76150-00  |
| 20V                                   | VCO. Tunable filter | 34.0                    | 15.2    | 6.5      | 5.0      | 5.2                      | 6.8          | 140                                       | M208a                 | DH76150-02  |
| 20V                                   | VCO. Tunable filter | 34.1                    | 15.3    | 6.7      | 5.2      | 5.2                      | 6.8          | 140                                       | SOD323                | DH76150-60N |
| 20V                                   | VCO. Tunable filter | 34                      | 15.2    | 6.6      | 5.1      | 5.2                      | 6.8          | 140                                       | F27d                  | DH76150-01  |

(1): other package available on request. consult factory

## ABRUPT TUNING VARACTORS

| Breakdown Voltage<br>Vbr @ Ir = 10 µA | Application         | Capacitance<br>@ F=1MHz | Figure of Merit<br>@ F = 50 MHz.<br>Vr=4V | Tuning Ratio<br>@ F = 1 MHz | Package (1)           | Part Number |
|---------------------------------------|---------------------|-------------------------|---|-----------------------------|-----------------------|-------------|
|                                       |                     | pF                      |   | Ct0V / Ct30V                |                       |             |
|                                       |                     | Vr = 4V                 |   | Min.                        |                       |             |
| V                                     |                     | Typ.                    | Min.                                      | Min.                        |                       |             |
| Min.                                  |                     | @ ±20%                  |   |                             |                       |             |
| 30V                                   | VCO. Tunable filter | 0.4                     | 4500                                      | 3.3                         | Die                   | EH71004-00  |
| 30V                                   | VCO. Tunable filter | 0.52                    | 4500                                      | 3.1                         | M208a                 | DH71004-02  |
| 30V                                   | VCO. Tunable filter | 0.58                    | 4500                                      | 3                           | F27d                  | DH71004-01  |
| 30V                                   | VCO. Tunable filter | 0.6                     | 4500                                      | 3.7                         | Die                   | EH71006-00  |
| 30V                                   | VCO. Tunable filter | 0.72                    | 4500                                      | 3.7                         | M208b                 | DH71006-03  |
| 30V                                   | VCO. Tunable filter | 0.8                     | 4400                                      | 4                           | Die                   | EH71008-00  |
| 30V                                   | VCO. Tunable filter | 0.92                    | 4400                                      | 3.8                         | M208b                 | DH71008-03  |
| 30V                                   | VCO. Tunable filter | 0.98                    | 4400                                      | 3.7                         | F27d                  | DH71008-01  |
| 30V                                   | VCO. Tunable filter | 1                       | 4300                                      | 4.3                         | Die                   | EH71010-00  |
| 30V                                   | VCO. Tunable filter | 1.12                    | 4300                                      | 4.3                         | M208a                 | DH71010-14  |
| 30V                                   | VCO. Tunable filter | 1.18                    | 4300                                      | 4                           | F27d                  | DH71010-01  |
| 30V                                   | VCO. Tunable filter | 1.2                     | 4200                                      | 4.5                         | Die                   | EH71012-00  |
| 30V                                   | VCO. Tunable filter | 1.25                    | 4300                                      | 4.3                         | SOT23. single diode   | DH71010-51N |
| 30V                                   | VCO. Tunable filter | 1.25                    | 4300                                      | 4.3                         | SOT23. common cathode | DH71010-53N |
| 30V                                   | VCO. Tunable filter | 1.25                    | 4300                                      | 4.3                         | SOD323                | DH71010-60N |
| 30V                                   | VCO. Tunable filter | 1.32                    | 4200                                      | 4.5                         | M208b                 | DH71012-02  |
| 30V                                   | VCO. Tunable filter | 1.38                    | 4200                                      | 4.3                         | F27d                  | DH71012-01  |



**ABRUPT TUNING VARACTORS**

| Breakdown Voltage<br>Vbr @ Ir = 10 µA | Application         | Capacitance<br>@ F=1MHz | Figure of Merit<br>@ F = 50 MHz.<br>Vr=4V | Tuning Ratio<br>@ F= 1 MHz | Package (1)           | Part Number |
|---------------------------------------|---------------------|-------------------------|---|----------------------------|-----------------------|-------------|
|                                       |                     | pF                      |   | Ct0V / Ct30V               |                       |             |
|                                       |                     | Vr = 4V<br>Typ.         |   | Min.                       |                       |             |
| 30V                                   | VCO. Tunable filter | 1.6                     | 4100                                      | 4.6                        | Die                   | EH71016-00  |
| 30V                                   | VCO. Tunable filter | 1.8                     | 4100                                      | 4.6                        | BH28                  | DH71016-13  |
| 30V                                   | VCO. Tunable filter | 1.85                    | 4100                                      | 4.6                        | SOT23. single diode   | DH71016-51N |
| 30V                                   | VCO. Tunable filter | 1.85                    | 4100                                      | 4.6                        | SOT23. common cathode | DH71016-53N |
| 30V                                   | VCO. Tunable filter | 2                       | 3900                                      | 4.7                        | Die                   | EH71020-00  |
| 30V                                   | VCO. Tunable filter | 2.12                    | 3900                                      | 4.7                        | M208b                 | DH71020-03  |
| 30V                                   | VCO. Tunable filter | 2.18                    | 3900                                      | 4.6                        | F27d                  | DH71020-01  |
| 30V                                   | VCO. Tunable filter | 2.25                    | 3900                                      | 4.7                        | SOT23. single diode   | DH71020-51N |
| 30V                                   | VCO. Tunable filter | 2.25                    | 3900                                      | 4.7                        | SOT23. common cathode | DH71020-53N |
| 30V                                   | VCO. Tunable filter | 2.25                    | 3900                                      | 4.8                        | SOD323                | DH71020-60N |
| 30V                                   | VCO. Tunable filter | 2.5                     | 3600                                      | 4.8                        | Die                   | EH71025-00  |
| 30V                                   | VCO. Tunable filter | 2.7                     | 3600                                      | 4.8                        | BH28                  | DH71025-10  |
| 30V                                   | VCO. Tunable filter | 3                       | 3400                                      | 4.8                        | Die                   | EH71030-00  |
| 30V                                   | VCO. Tunable filter | 3.18                    | 3400                                      | 4.7                        | F27d                  | DH71030-01  |
| 30V                                   | VCO. Tunable filter | 3.2                     | 3400                                      | 4.8                        | BH28                  | DH71030-12  |
| 30V                                   | VCO. Tunable filter | 3.25                    | 3400                                      | 4.8                        | SOT23. single diode   | DH71030-51N |
| 30V                                   | VCO. Tunable filter | 3.25                    | 3400                                      | 4.8                        | SOT23. common cathode | DH71030-53N |
| 30V                                   | VCO. Tunable filter | 3.25                    | 3400                                      | 4.8                        | SOD323                | DH71030-60N |
| 30V                                   | VCO. Tunable filter | 3.7                     | 3200                                      | 4.8                        | Die                   | EH71037-00  |
| 30V                                   | VCO. Tunable filter | 3.9                     | 3200                                      | 4.8                        | BH28                  | DH71037-10  |
| 30V                                   | VCO. Tunable filter | 4.5                     | 3000                                      | 4.9                        | Die                   | EH71045-00  |
| 30V                                   | VCO. Tunable filter | 4.62                    | 3000                                      | 4.9                        | M208c                 | DH71045-15  |
| 30V                                   | VCO. Tunable filter | 4.75                    | 3000                                      | 4.8                        | SOT23. single diode   | DH71045-51N |
| 30V                                   | VCO. Tunable filter | 5.4                     | 2800                                      | 4.9                        | Die                   | EH71054-00  |
| 30V                                   | VCO. Tunable filter | 5.65                    | 2800                                      | 4.9                        | F30                   | DH71054-03  |
| 30V                                   | VCO. Tunable filter | 5.75                    | 3000                                      | 4.1                        | SOT23. common cathode | DH71045-53N |
|                                       |                     | <b>± 10%</b>            |   |                            |                       |             |
| 30V                                   | VCO. Tunable filter | 6.9                     | 2600                                      | 4.9                        | BH28                  | DH71067-11  |
| 30V                                   | VCO. Tunable filter | 6.95                    | 2600                                      | 4.9                        | SOT23. single diode   | DH71067-51N |
| 30V                                   | VCO. Tunable filter | 8.2                     | 2400                                      | 5                          | BH142a                | DH71080-02  |
| 30V                                   | VCO. Tunable filter | 10.2                    | 2200                                      | 5                          | F27d                  | DH71100-10  |
| 30V                                   | VCO. Tunable filter | 10.25                   | 2200                                      | 5                          | SOT23. single diode   | DH71100-51N |
| 30V                                   | VCO. Tunable filter | 10.25                   | 2200                                      | 5                          | SOT23. common cathode | DH71100-53N |
| 30V                                   | VCO. Tunable filter | 12.2                    | 2000                                      | 5.1                        | BH28                  | DH71120-10  |
| 30V                                   | VCO. Tunable filter | 15.2                    | 1800                                      | 5.1                        | BH28                  | DH71150-11  |
| 30V                                   | VCO. Tunable filter | 15.4                    | 1800                                      | 5.1                        | BH158am               | DH71150-01  |
| 30V                                   | VCO. Tunable filter | 22.2                    | 1400                                      | 5.2                        | BH142f                | DH71220-03  |
| 30V                                   | VCO. Tunable filter | 56.2                    | 650                                       | 5.2                        | F27d                  | DH71560-01  |
| 30V                                   | VCO. Tunable filter | 56.2                    | 650                                       | 5.2                        | BH142a                | DH71560-10  |
| 30V                                   | VCO. Tunable filter | 100                     | 300                                       | 5.2                        | F27d                  | DH71999-01  |

# Silicon Pin Diodes

Abrupt Tuning Varactors  
 Limiter Pin Diodes  
 Frequency Multiplier Pin Diodes

## ABRUPT TUNING VARACTORS

| Breakdown Voltage<br>Vbr @ Ir = 10 µA | Application         | Capacitance @ F=1MHz |         | Figure of Merit @ F = 50 MHz. Vr=4V |   | Tuning Ratio @ F= 1 MHz | Package (1)                      | Part Number |
|---------------------------------------|---------------------|----------------------|---------|-------------------------------------|---|-------------------------|----------------------------------|-------------|
|                                       |                     | pF                   |         |                                     |   |                         |                                  |             |
|                                       |                     | V                    | Vr = 4V |                                     |   | Typ.                    | Typ.                             |             |
| Min.                                  |                     | Typ.                 |         | Typ.                                |   | Typ.                    |                                  |             |
|                                       |                     |                      |         |                                     |   |                         | <b>Tuning ratio Ct0V / Ct45V</b> |             |
| 45V                                   | VCO. Tunable filter | 0.4                  |         | 3000                                | - | 3.5                     | Die                              | EH72004-01  |
| 45V                                   | VCO. Tunable filter | 3                    |         | 2300                                | - | 5.5                     | Die                              | EH72030-00  |
| 45V                                   | VCO. Tunable filter | 3.18                 |         | 2300                                | - | 5.5                     | F27d                             | DH72030-01  |
| 45V                                   | VCO. Tunable filter | 3.7                  |         | 2200                                | - | 5.6                     | Die                              | EH72037-00  |
| 45V                                   | VCO. Tunable filter | 6.7                  |         | 1800                                | - | 5.9                     | Die                              | EH72067     |
|                                       |                     |                      |         |                                     |   |                         | <b>Tuning ratio Ct0V / Ct90V</b> |             |
| 90V                                   | VCO. Tunable filter | 82                   |         | 150                                 |   | 10                      | Die                              | DH74820     |

(1): other package available on request. consult factory

## LIMITER PIN DIODES

| Breakdown Voltage<br>Vbr @ Ir = 10 µA |      | Application | Capacitance @ F = 1 MHz pF |      |           | Series Resistance Rs @ F = 120 MHz Ω | Minority Carrier Lifetime τ1 ns | Threshold @ F= 2.7 GHz. 1 dB Limiting dBm | Leakage power Pout @ F= 2.7GHz dBm | Peak Power with Pulse = 1 µs DC = 1% dBm | CW power Pin W | Package (1) | Part Number |
|---------------------------------------|------|-------------|----------------------------|------|-----------|--------------------------------------|---------------------------------|---|------------------------------------|--|----------------|-------------|-------------|
| Min.                                  | Max. |             | @ Vr = 0V                  |      | @ Vr = 6V | If = 10 mA                           | If= 10 mA. Ir = 6 mA            | Typ.                                      | Typ.                               | Max.                                     | Max.           |             |             |
|                                       |      |             | Typ.                       | Min. | Max.      | Max.                                 | Typ.                            |   |                                    |  |                |             |             |
| 25                                    | 50   | Limiter     | 0.14                       | 0.08 | 0.12      | 1.8                                  | 20                              | 10  | 20                                 | 50                                       | 2.0            | Die         | EH60033-00  |
| 25                                    | 50   | Limiter     | 0.2                        | 0.12 | 0.17      | 1.5                                  | 20                              | 10  | 20                                 | 50                                       | 2.0            | Die         | EH60034-00  |
| 25                                    | 50   | Limiter     | 0.26                       | 0.2  | 0.24      | 1.8                                  | 20                              | 10  | 20                                 | 50                                       | 2.0            | M208b       | DH60033-03  |
| 25                                    | 50   | Limiter     | 0.28                       | 0.17 | 0.23      | 1                                    | 25                              | 10  | 21                                 | 52                                       | 2.5            | Die         | EH60035-00  |
| 25                                    | 50   | Limiter     | 0.32                       | 0.26 | 0.3       | 1.8                                  | 20                              | 10  | 20                                 | 50                                       | 2.0            | F27d        | DH60033-02  |
| 25                                    | 50   | Limiter     | 0.32                       | 0.24 | 0.29      | 1.5                                  | 20                              | 10  | 20                                 | 50                                       | 2.0            | M208b       | DH60034-03  |
| 25                                    | 50   | Limiter     | 0.38                       | 0.3  | 0.35      | 1.5                                  | 20                              | 10  | 20                                 | 50                                       | 2.0            | F27d        | DH60034-02  |
| 25                                    | 50   | Limiter     | 0.45                       | 0.23 | 0.4       | 0.9                                  | 30                              | 10  | 22                                 | 53                                       | 3.0            | Die         | EH60036-00  |
| 25                                    | 50   | Limiter     | 0.46                       | 0.35 | 0.41      | 1                                    | 25                              | 10  | 21                                 | 52                                       | 2.5            | F27d        | DH60035-01  |
| 25                                    | 50   | Limiter     | 0.57                       | 0.35 | 0.52      | 0.9                                  | 30                              | 10  | 22                                 | 53                                       | 3.0            | M208b       | DH60036-03  |
| 25                                    | 50   | Limiter     | 0.63                       | 0.41 | 0.69      | 0.9                                  | 30                              | 10  | 22                                 | 53                                       | 3.0            | F27d        | DH60036-01  |
| 25                                    | 50   | Limiter     | 0.7                        | 0.4  | 0.6       | 0.7                                  | 40                              | 10  | 23                                 | 56                                       | 4.0            | Die         | EH60037-00  |
| 25                                    | 50   | Limiter     | 0.82                       | 0.52 | 0.72      | 0.7                                  | 40                              | 10  | 23                                 | 56                                       | 4.0            | M208b       | DH60037-02  |
| 25                                    | 50   | Limiter     | 0.88                       | 0.77 | 0.83      | 1                                    | 25                              | 10  | 21                                 | 52                                       | 2.5            | BH198       | DH60035-16  |
| 50                                    | 70   | Limiter     | 0.1                        | 0.06 | 0.08      | 1.8                                  | 30                              | 15  | 24                                 | 52                                       | 2.5            | Die         | EH60052-00  |
| 50                                    | 70   | Limiter     | 0.22                       | 0.18 | 0.2       | 1.8                                  | 30                              | 15  | 24                                 | 52                                       | 2.5            | M208a       | DH60052-02  |
| 50                                    | 70   | Limiter     | 0.25                       | 0.21 | 0.23      | 1.8                                  | 30                              | 15  | 24                                 | 52                                       | 2.5            | BMH76       | DH60052-01  |
| 50                                    | 70   | Limiter     | 0.26                       | 0.2  | 0.24      | 1.4                                  | 30                              | 15  | 24                                 | 52                                       | 2.5            | M208f       | DH60053-02  |
| 50                                    | 70   | Limiter     | 0.2                        | 0.12 | 0.17      | 1.1                                  | 35                              | 15  | 25                                 | 53                                       | 3.0            | Die         | EH60054-00  |
| 50                                    | 70   | Limiter     | 0.38                       | 0.3  | 0.35      | 1.1                                  | 35                              | 15  | 25                                 | 53                                       | 3.0            | F27d        | DH60054-02  |
| 50                                    | 70   | Limiter     | 0.28                       | 0.17 | 0.23      | 1                                    | 40                              | 15  | 26                                 | 54                                       | 3.5            | Die         | EH60055-00  |



## LIMITER PIN DIODES

| Breakdown Voltage<br>Vbr @ Ir = 10 $\mu$ A |      | Application | Capacitance<br>@ F = 1 MHz<br>pF |      |           | Series Resistance<br>Rs @ F = 120 MHz<br>$\Omega$ | Minority Carrier<br>Lifetime<br>$\tau$<br>ns | Threshold @<br>F = 2.7 GHz, 1 dB<br>Limiting<br>dBm | Leakage power<br>Pout<br>@ F = 2.7GHz<br>dBm | Peak Power<br>with<br>Pulse = 1 $\mu$ s<br>DC = 1%<br>dBm | CW power<br>Pin<br>W | Package<br>(1) | Part Number |
|--|------|-------------|----------------------------------|------|-----------|---|--|---|--|---|----------------------|----------------|-------------|
| Min.                                       | Max. |             | @ Vr = 0V                        |      | @ Vr = 6V | If = 10 mA  | If = 10 mA, Ir = 6 mA                        | Typ.  | Typ.   | Max.  | Max.                 |                |             |
|  |      |             | Typ.                             | Min. | Max.      | Max.  | Typ.   |   |  |   |                      |                |             |
| 50   | 70   | Limiter     | 0.4                              | 0.29 | 0.35      | 1   | 40   | 15  | 26   | 54  | 3.5                  | M208b          | DH60055-03  |
| 50   | 70   | Limiter     | 0.45                             | 0.23 | 0.4       | 0.9   | 50   | 15  | 27   | 57  | 4.0                  | Die            | EH60056-00  |
| 50   | 70   | Limiter     | 0.57                             | 0.35 | 0.52      | 0.9   | 50   | 15  | 27   | 57  | 4.0                  | M208b          | DH60056-01  |
| 50   | 70   | Limiter     | 0.7                              | 0.4  | 0.6       | 0.8   | 60   | 15  | 28   | 58  | 5.0                  | Die            | EH60057-00  |
| 50   | 70   | Limiter     | 0.82                             | 0.52 | 0.72      | 0.8   | 60   | 15  | 28   | 58  | 5.0                  | M208b          | DH60057-03  |
| 50   | 70   | Limiter     | 0.85                             | 0.55 | 0.75      | 0.8   | 60   | 15  | 28   | 58  | 5.0                  | BMH76          | DH60057-02  |
| 70   | 90   | Limiter     | 0.1                              | 0.06 | 0.08      | 1.7   | 50   | 18  | 27   | 54  | 3.0                  | Die            | EH60072-00  |
| 70   | 90   | Limiter     | 0.2                              | 0.12 | 0.17      | 1.4   | 60   | 18  | 30   | 55  | 4.0                  | Die            | EH60074-00  |
| 70   | 90   | Limiter     | 0.32                             | 0.24 | 0.29      | 1.4   | 60   | 18  | 30   | 55  | 4.0                  | M208a          | DH60074-01  |
| 70   | 90   | Limiter     | 0.45                             | 0.23 | 0.4       | 0.9   | 100  | 18  | 32   | 58  | 5.0                  | Die            | EH60076-00  |
| 70   | 90   | Limiter     | 0.57                             | 0.35 | 0.52      | 0.9   | 100  | 18  | 32   | 58  | 5.0                  | M208a          | DH60076-02  |
| 90   | 120  | Limiter     | 0.1                              | 0.06 | 0.08      | 1.7   | 150  | 20  | 31   | 56  | 3.5                  | Die            | EH60102-00  |
| 90   | 120  | Limiter     | 0.2                              | 0.12 | 0.17      | 1.2   | 250  | 20  | 33   | 59  | 5.0                  | Die            | EH60104-00  |
| 90   | 120  | Limiter     | 0.32                             | 0.24 | 0.29      | 1.2   | 250  | 20  | 33   | 59  | 5.0                  | M208b          | DH60104-01  |
| 90   | 120  | Limiter     | 0.45                             | 0.23 | 0.4       | 0.8   | 400  | 20  | 35   | 61  | 7.0                  | Die            | EH60106-00  |
| 90   | 120  | Limiter     | 0.57                             | 0.35 | 0.52      | 0.8   | 400  | 20  | 35   | 61  | 7.0                  | M208b          | DH60106-03  |
| 90   | 120  | Limiter     | 0.63                             | 0.41 | 0.58      | 0.8   | 400  | 20  | 35   | 61  | 7.0                  | F27d           | DH60106-01  |

(1): other package available on request. consult factory

## FREQUENCY MULTIPLIER PIN DIODES

| Breakdown Voltage<br>Vbr @ Ir = 10 $\mu$ A<br>V |      | Application               | Capacitance<br>F = 1MHz, Vr = 6V<br>pF |      | Minority carrier<br>Lifetime $\tau$<br>If = 10mA, Ir = 6 mA<br>ns | Snap-Off Time<br>tso<br>If = 10 mA, Vr = 10V<br>ps | Output Frequency<br>Fout<br>GHz | Package (1) | Part Number |
|---|------|---------------------------|--|------|---|--|---------------------------------|-------------|-------------|
| Min.  | Max. |                           | Min.                                   | Max. | Min.  | Max.   |                                 |             |             |
| 15  | 25   |                           | High Multiplication order              | 0.2  | 0.3   | 6  |                                 |             |             |
| 15  | 25   | High Multiplication order | 0.32                                   | 0.42 | 6   | 60   | 10 - 25                         | M208b       | DH267-41    |
| 20  | 35   | High Multiplication order | 0.2                                    | 0.5  | 10  | 75   | 8 - 16                          | Die         | EH292 - 00  |
| 20  | 35   | High Multiplication order | 0.32                                   | 0.62 | 10  | 75   | 8 - 16                          | M208b       | DH292-105   |
| 20  | 35   | High Multiplication order | 0.38                                   | 0.68 | 10  | 75   | 8 - 16                          | F27d        | DH292-00    |
| 30  | 45   | High Multiplication order | 0.5                                    | 1.1  | 20  | 120  | 5 - 12                          | Die         | EH256 - 00  |
| 30  | 45   | High Multiplication order | 0.62                                   | 1.22 | 20  | 120  | 5 - 12                          | M208b       | DH256-57    |
| 30  | 45   | High Multiplication order | 0.68                                   | 1.3  | 20  | 120  | 5 - 12                          | F27d        | DH256-00    |
| 40  | 60   | High Multiplication order | 0.9                                    | 2.0  | 35  | 200  | 2 - 8                           | Die         | EH252-00    |
| 40  | 60   | High Multiplication order | 1.05                                   | 2.15 | 35  | 200  | 2 - 8                           | M208b       | DH252-01    |
| 40  | 60   | High Multiplication order | 1.2                                    | 2.2  | 35  | 200  | 2 - 8                           | F27d        | DH252-00    |
| 45  | 70   | High Multiplication order | 4.0                                    | 7.0  | 125   | 400  | 0.2 - 2                         | Die         | EH294-00    |
| 45  | 70   | High Multiplication order | 4.15                                   | 7.15 | 125   | 400  | 0.2 - 2                         | M208a       | DH294-28    |
| 45  | 70   | High Multiplication order | 4.2                                    | 7.2  | 125   | 400  | 0.2 - 2                         | BH142a      | DH294-27    |

(1): other package available on request. consult factory

# Silicon Pin Diodes

Step Recovery Diodes  
Voltage Multiplier Diodes  
Anti Parallel Pin Diodes

## STEP RECOVERY DIODES

| Breakdown Voltage<br>V <sub>br</sub> @ I <sub>r</sub> = 10 μA<br>V | Application    | Capacitance<br>F=1MHz, Vr = 6V<br>pF |      | Minority carrier<br>Lifetime τ <sub>l</sub><br>If = 10mA, Ir=6 mA<br>ns |      | Snap-Off Time<br>t <sub>so</sub><br>If = 10 mA, Vr = 10V<br>ps |           | Package (1) | Part Number |
|--|----------------|--------------------------------------|------|---|------|--|-----------|-------------|-------------|
|  |                | Min.                                 | Max. | Min.  | Typ. | Max.   |           |             |             |
| 25   | Comb generator | 0.4                                  | 10   | 75  | 100  | Die  | EH545 -00 |             |             |
| 25   | Comb generator | 0.52                                 | 10   | 75  | 100  | M208b  | DH545 -01 |             |             |
| 25   | Comb generator | 0.65                                 | 10   | 75  | 100  | SOT23, single diode  | DH545-51N |             |             |
| 25   | Comb generator | 0.65                                 | 10   | 75  | 100  | SOT23, common cathode  | DH545-54N |             |             |
| 25   | Comb generator | 0.65                                 | 10   | 75  | 100  | SOD323   | DH545-60N |             |             |
| 30   | Comb generator | 1.0                                  | 20   | 90  | 140  | Die  | EH543 -00 |             |             |
| 30   | Comb generator | 1.25                                 | 20   | 90  | 140  | SOT23, single diode  | DH543-51N |             |             |
| 30   | Comb generator | 1.25                                 | 20   | 90  | 140  | SOT23, common cathode  | DH543-54N |             |             |
| 30   | Comb generator | 1.25                                 | 20   | 90  | 140  | SOD323   | DH543-60N |             |             |
| 50   | Comb generator | 1.5                                  | 40   | 150   | 250  | Die  | EH542-00  |             |             |
| 50   | Comb generator | 1.66                                 | 40   | 150   | 250  | BH16   | DH542-10  |             |             |
| 50   | Comb generator | 1.75                                 | 40   | 150   | 250  | SOT23, single diode  | DH542-51N |             |             |
| 50   | Comb generator | 1.75                                 | 40   | 150   | 250  | SOT23, common cathode  | DH542-54N |             |             |
| 50   | Comb generator | 1.75                                 | 40   | 150   | 250  | SOD323   | DH542-60N |             |             |

(1): other package available on request. consult factory

## VOLTAGE MULTIPLIER DIODES

| Breakdown Voltage<br>V <sub>br</sub> @ I <sub>r</sub> = 10 μA<br>V | Application        | Capacitance<br>@ F= 1 MHz<br>pF |      | Reverse<br>Recovery<br>Time T <sub>rr</sub><br>ns |   | Package (1) | Part Number |
|--|--------------------|---------------------------------|------|---|---|-------------|-------------|
|  |                    | Typ.                            | Max. | Max.  |   |             |             |
| 500  | Voltage Multiplier | 0.15                            | 0.3  | 700   | DFN-3L1, serie diode, clockwise         | DH85050-93N |             |
| 1000   | Voltage Multiplier | 0.1                             | 0.3  | 500   | DFN-3L1, serie diode, counter clockwise | DH85100-91N |             |
| 1000   | Voltage Multiplier | 0.1                             | 0.3  | 500   | DFN-3L1, serie diode, clockwise         | DH85100-92N |             |

## ANTI PARALLEL PIN DIODES

| Applicable<br>Voltage<br>@ I <sub>r</sub> < 10 μA<br>V | Application                                  | Configuration          | Single diode   |   |   | Packaged diodes                               |   | Package  | Part Number |
|--|--|------------------------|--|---|---|---|---|----------|-------------|
|  |  |                        | Breakdown Vol-<br>tage<br>V <sub>br</sub> @ I <sub>r</sub> = 10 μA | Junction<br>Capacitance<br>@-6V<br>F= 1 MHz | Minority<br>Carrier Lifetime<br>τ <sub>l</sub><br>If=10mA, Ir=6mA<br>ns | Total<br>Capacitance<br>@0V<br>F= 1 MHz<br>pF | Serie<br>Resistance<br>@ 10 mA<br>F= 120 MHz<br>Ω |          |             |
|  |  |                        | Min.   | Max.  | Typ.  | Typ.  | Max.  |          |             |
| 70   | MRI passive rectifier or short circuit diode | Antiparallel pair      | 70   | 0.4   | 100   | 1.2   | 1.2   | 2X2SMDAM | DH52076-01  |
| 70   | MRI passive rectifier or short circuit diode | Dual Antiparallel pair | 70   | 0.4   | 100   | 2   | 0.6   | 2X2SMDAM | DH54076-01  |