

SILICON MULTIPLIER VARACTORS

Description

These silicon multiplier varactors (from 0.2 to 25 GHz) are designed for harmonic generation of high power levels (stack configuration) and/or at high multiplication orders.

Packaged diodes

| CHARACTERISTICS AT 25°C | | VARACTOR CHIPS PER PACKAGE | OUTPUT FREQ. F_0 | BREAKDOWN VOLTAGE V_{BR} | | JUNCTION CAPACIT. C_j | | MIN. CAR. LIFETIME τ_I | SNAP-OFF TIME t_{so} | THERMAL RESISTANCE R_{th} | POWER OUTPUT P_o | |
|-------------------------|---------|----------------------------|--------------------|----------------------------|-----|----------------------------|-----|-------------------------------|-------------------------------|-----------------------------|--------------------|---|
| TEST CONDITIONS | | | N/A | $I_R = 10 \mu A$ | | $V_R = 6 V$ $f = 1 MHz$ | | $I_F = 10 mA$ $I_R = 6 mA$ | $I_F = 10 mA$ $V_R = 10 V$ | N/A | $f_o = (n)f_i$ | |
| TYPE | CASE | GHZ | V | | pF | | ns | ps | °C/W | W | | |
| | | | min | max | min | max | min | max | max | typ. | (n) | |
| DH294 | DO7 | 1 | 0.2 - 2 | 45 | 70 | 4.0 | 7.0 | 125 | 400 | 300 | 0.5 | 2 |
| DH200 | F49 | 1 | 0.5 - 2 | 90 | 140 | 5.5 | 7.0 | 250 | 1000 | 8 | 20.0 | 2 |
| DH270 | S268-W1 | 1 | 2 - 3 | 80 | 110 | 4.0 | 5.5 | 160 | 700 | 10 | 15.0 | 2 |
| DH110 | F27d | 1 | 2 - 4 | 60 | 90 | 3.0 | 4.0 | 100 | 400 | 25 | 9.0 | 2 |
| DH293 | F60d | 1 | 3 - 6 | 50 | 70 | 2.0 | 3.0 | 60 | 250 | 30 | 6.0 | 2 |
| DH252 | F27d | 1 | 2 - 8 | 40 | 60 | 0.9 | 2.0 | 35 | 200 | 50 | 3.0 | 2 |
| DH256 | F27d | 1 | 5 - 12 | 30 | 45 | 0.5 | 1.1 | 20 | 120 | 60 | 2.0 | 2 |
| DH292 | F27d | 1 | 8 - 16 | 20 | 35 | 0.2 | 0.5 | 10 | 75 | 70 | 0.6 | 2 |
| DH267 | F27d | 1 | 10 - 25 | 15 | 25 | 0.2 | 0.3 | 6 | 60 | 100 | 0.2 | 2 |

Temperature ranges:

Operating junction (T_j) : -55° C to +150° C

Storage : -65° C to +175° C