



# DC1314/16

## GaAs SCHOTTKY J-BAND MICROSTRIP LID DETECTOR DIODES

These diodes are used in detector applications requiring a better noise figure than can be achieved with silicon diodes and as sensitive broadband detectors at high microwave frequencies.

These diodes can be supplied in matched pairs by the addition of the letter M to the type number, or with reverse polarity by the addition of the letter R to the type number.

### FEATURES

- High  $T_{SS}$
- Very Good Temperature Stability
- Very High Pulse Burn Out
- J Band Operation

### APPLICATIONS

GaAs schottky detector diodes are finding increasing applications in instrumentation, military, civil and marine radar and communications systems.

### LIMITING CONDITIONS

Storage Temperature	-55°C to +150°C
Operating Temperature	-55°C to +150°C
Pulse Burn Out (Duty Cycle 0.01%)	200mW
CW Burn Out	100mW

### TYPICAL DC CHARACTERISTICS $T_{amb} 25^{\circ}C$

TYPE NUMBER	DC1314	DC1316
Frequency	J Band	J Band
Forward Voltage ( $V_f$ ) @ 100 $\mu$ A	600mV	600mV
Reverse Voltage ( $V_r$ ) min. @ 10 $\mu$ A	2V	2V
$R_s$ (10mA to 20mA)	6 $\Omega$	6 $\Omega$
$C_j$ @ 0V	60fF	60fF
Outline	59	20

### TYPICAL RF CHARACTERISTICS $T_{amb} 25^{\circ}C$

TYPE NUMBER	DC1314	DC1316
Test Frequency	16.5GHz	16.5GHz
Tangential Sensitivity ( $I_{bias} = 150\mu$ A)	-47dBm	-47dBm
$V_{out}$ (-20dBm) $I_{bias} = 150\mu$ A	32mV	32mV
Video Impedance	200 $\Omega$	200 $\Omega$