GEC PLESSEY
SEMICONDUCTORS

DC1508/11/19

SILICON SCHOTTKY S-BAND MICROSTRIP LID MIXER DIODES

DESCRIPTION

This general purpose diode available in the microstrip package is suitable for applications requiring high performance mixers.

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

- Low drive LO level
- Excellent l/f noise
- Low conversion loss
- S band operation

APPLICATIONS

Silicon Schottky mixer diodes are finding increasing applications in instrumentation, military, civil and marine radar and communications systems.

LIMITING CONDITIONS

Storage conditions	-55°C to +150°C
Operating temperature	-55°C to +150°C
Pulse burn out (Duty cycle 0.01%)	500mW
CW burn out	300mW

TYPICAL DC CHARACTERSITICS Tamb 25°C

TYPE NUMBER	DC1508			DC1511			DC1519
	E	F	G	E	F	G	E
Frequency	S Band	S Band	S Band	S Band	S Band	S Band	S Band
Forward Voltage (Vf) @ 100µA	350mV	350mV	350mV	350mV	350mV	350mV	350mV
Reverse voltage (Vr) @ 10µA	2V	2V	2V	2V	2V	2V	2V
Rs (10mA to 20mA) in Ohms	10	10	10	10	10	10	10
C_j @ 0V	180fF	180fF	180fF	180fF	180fF	180fF	180fF
Outline	20	20	20	59	59	59	09

TYPICAL RF CHARACTERSITICS Tamb 25°C

TYPE NUMBER	DC1508			DC1511			DC1519
	E	F	G	E	F	G	
Test Freq. (GHz)	3	3	3	3	3	3	3
LO Drive level (μW)	700	700	700	700	700	700	700
IF Impedance at 150μA (Ohms)	350	350	350	350	350	350	350
Max Overall noise figure O.N.F. (dB)	7.0	6.5	6.0	7.0	6.5	6.0	6.5
Conversion loss (dB)	5.5	5.0	4.5	5.0	4.5	4.5	5.0