

DC1571/73

SILICON SCHOTTKY S-BAND MICROSTRIP LOW DRIVE MIXER DIODES

DESCRIPTION

The DC1570 series are medium barrier height silicon mixer diodes intended primarily for operation as low drive mixer diodes in systems where available local oscillator power is restricted and can be used as replacement for point contact diodes in many applications.

FEATURES

- Low drive LO level
- Excellent I_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 +70°C
Operating temperature	-55°C to +70°C
Pulse burn out (Duty cycle 0.01%)	300mW
CW burn out	150mW

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

TYPE NUMBER	DC1571			DC1573		
	E S Band	F S Band	G S Band	E S Band	F S Band	G S Band
Frequency						
Forward Voltage (V_f) @ 100 μA	200mV	200mV	200mV	200mV	200mV	200mV
Reverse voltage (V_r) @ 10 μA	2V	2V	2V	2V	2V	2V
R_s (10mA to 20mA) in Ohms	10	10	10	10	10	10
C_j @ 0V (fF)	180	180	180	180	180	180
Outline	20	20	20	59	59	59

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

TYPE NUMBER	DC1571			DC1573		
	E	F	G	E	F	G
Test Freq. (GHz)	3.0	3.0	3.0	3.0	3.0	3.0
LO Drive level (μW)	700	700	700	700	700	700
IF Impedance at 150 μA (Ohms)	400	400	400	400	400	400
Max Overall noise figure O.N.F. (dB)	7.5	7.0	6.5	7.5	6.5	6.0
Conversion loss (dB)	6.0	5.5	5.0	6.0	5.0	4.5