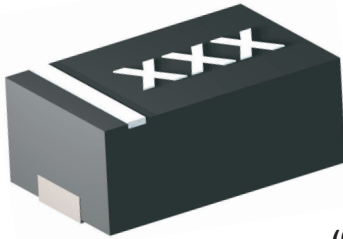


MSWSE-050-17

Silicon PIN Diode Switch Element



(0805P)
non-hermetic



Description

The MSWSE-050-17 is a PIN diode SPST switch element designed for medium incident power applications, up to 40W C.W. It has low insertion loss.

Features

- Broadband performance up to 3.0 GHz
- Low Insertion Loss
- Cost effective choice for switch applications

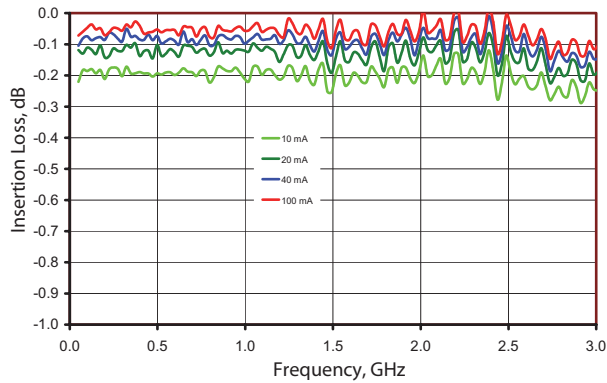
Maximum Ratings

RATING	LIMITS	UNITS
V_R	500	V
I_F	500	mA
θ_{JC}	10	$^{\circ}\text{C} / \text{W}$
T_J	+175	$^{\circ}\text{C}$
T_{STG}	-55 to +150	$^{\circ}\text{C}$
T_{SOLDER}	+260 $^{\circ}\text{C}$ per JEDEC STD-J-20C	

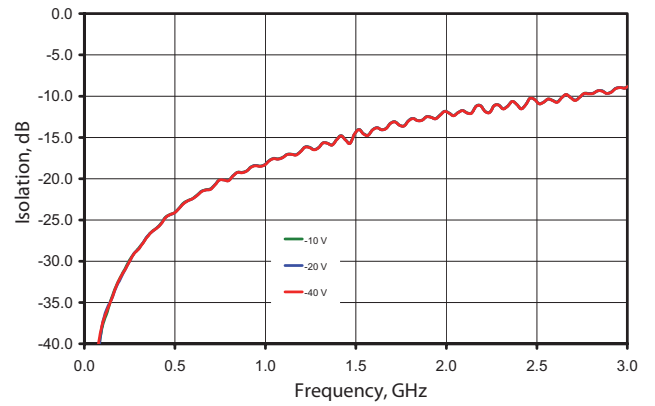
Electrical Characteristics, $T_C = +25^{\circ}\text{C}$

SYMBOL	TEST CONDITIONS			MIN	TYPICAL	MAX	UNITS
V_{BR}	$I_R = 10 \mu\text{A}$			500	—	—	V
V_F	$I_F = 50 \text{ mA}$			—	850	950	mV
C_T	$V_R = 50 \text{ V}$	$F = 1 \text{ MHz}$		—	0.20	0.25	pF
R_S	$I_F = 100 \text{ mA}$	$F = 100 \text{ MHz}$		—	0.75	—	Ω
τ	$I_F = 10 \text{ mA}$	$I_R = 6 \text{ mA}$	measured at 50%	—	1600	—	ns
W	I-Layer			—	80	—	μm
I_L	$I_F = 50 \text{ mA}$	$F < 0.5 \text{ GHz}$		—	0.06	0.2	dB
		$F < 2.0 \text{ GHz}$		—	0.1	0.2	dB
IRL / ORL	$I_F = 50 \text{ mA}$	$F < 0.5 \text{ GHz}$		25	33	—	dB
		$F < 2.0 \text{ GHz}$		20	25	—	dB
I_{SO}	$V_R = 50 \text{ V}$	$F < 0.5 \text{ GHz}$		22	24	—	dB
		$F < 2.0 \text{ GHz}$		20	12	—	dB

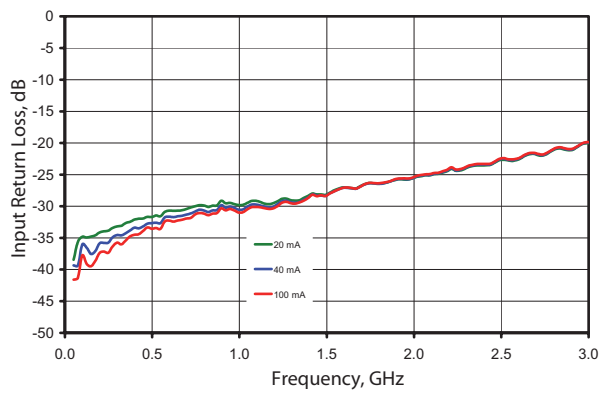
Insertion Loss



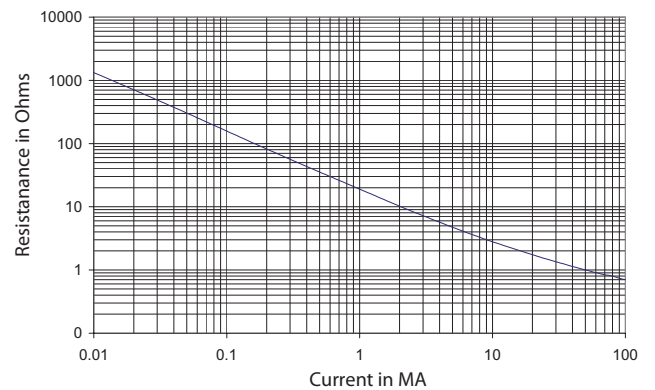
Isolation



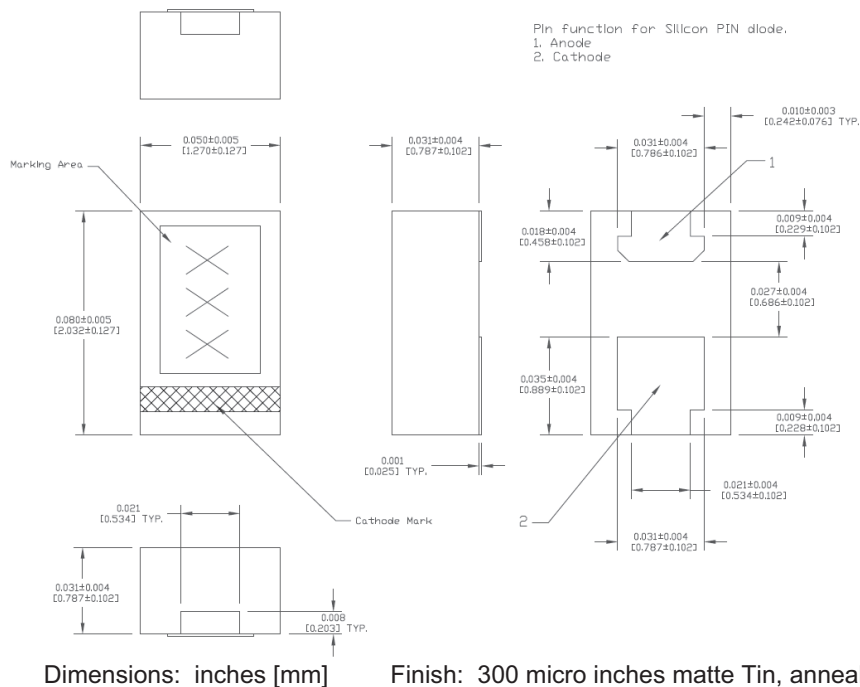
Input Return Loss



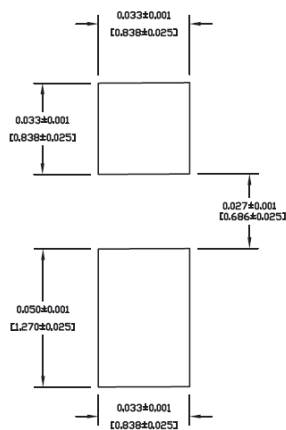
Series Resistance vs. Current



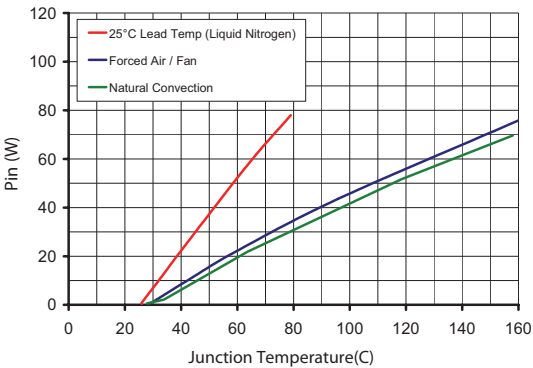
Package Outline



Printed Circuit Board Layout



Junction Temperature vs Power 20 Mil PCB Mounted on Heat Sink 25°C Ambient 1.3 GHz



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Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.