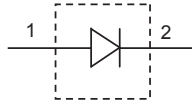
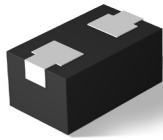


MSWSE-010-15S

Silicon PIN Diode Switch Element



0402
(Molded Plastic DFN Package)

Description

The MSWSE-010-15S is a PIN diode switch element designed for medium incident power applications, up to 10 W C.W. It has low insertion loss and medium isolation below 3.0 GHz.

Features

- SMALL SIZE (40 mils X 24 mils)
- Broadband performance up to 3.0 GHz
- Supports up to 10 watts power
- Low insertion loss 0.15 dB typical up to 3.0 GHz
- Cost effective choice for switch applications

Maximum Ratings

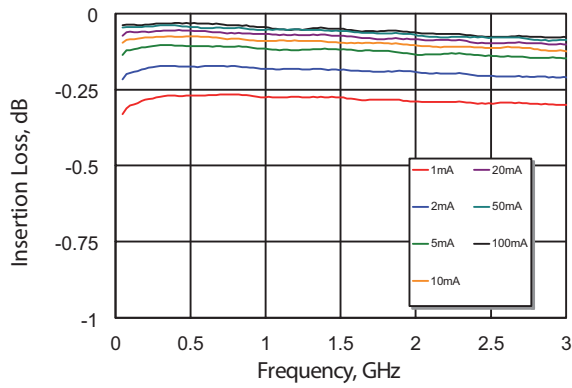
RATING	LIMITS	UNITS
V_R	200	V
I_F	200	mA
θ_{JC}	35	°C/W
T_J	+175	°C
T_{STG}	-55 to +150	°C
T_{SOLDER}	+260 °C per JEDEC J-STD-20C	

Electrical Specifications, $T_A = +25\text{ °C}$

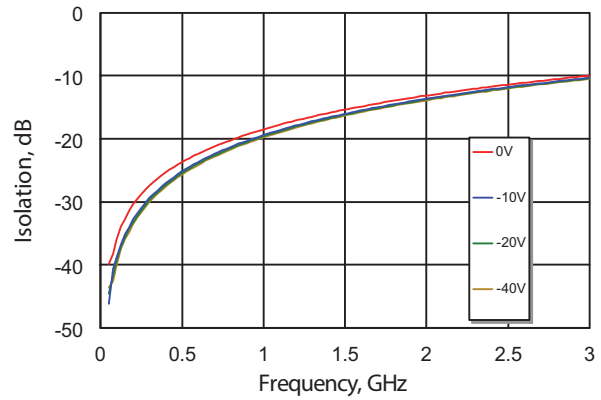
SYMBOL	TEST CONDITIONS		MIN	TYPICAL	MAX	UNITS
V_{BR}	$I_R = 10\text{ }\mu\text{A}$		200	–	–	V
V_F	$I_F = 50\text{ mA}$		–	870	950	mV
C_J	$V_R = -50\text{ V}$	$F = 1\text{ MHz}$	–	0.13	–	pF
C_T	$V_R = -50\text{ V}$	$F = 1\text{ MHz}$	–	0.17	0.22	pF
R_S	$I_F = 30\text{ mA}$	$F = 500\text{ MHz}$	–	0.8	1.0	Ω
	$I_F = 100\text{ mA}$	$F = 500\text{ MHz}$	–	0.6	0.8	Ω
τ	$I_F = 10\text{ mA}$ $I_R = 6\text{ mA}$	measured at 50%	–	650	900	ns
W	I-Layer		–	40	–	μm
IL	$I_F = 50\text{ mA}$	$F < 1.0\text{ GHz}$	–	0.05	–	dB
		$F < 2.0\text{ GHz}$	–	0.10	0.25	dB
IRL	$I_F = 50\text{ mA}$	$F < 1.0\text{ GHz}$	25	30	–	dB
		$F < 2.0\text{ GHz}$	–	25	–	dB
Iso	$V_R = 50\text{ V}$	$F < 1.0\text{ GHz}$	15	20	–	dB
		$F < 2.0\text{ GHz}$	–	15	–	dB



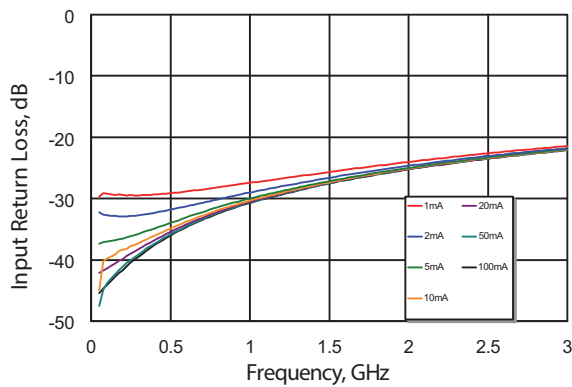
Insertion Loss



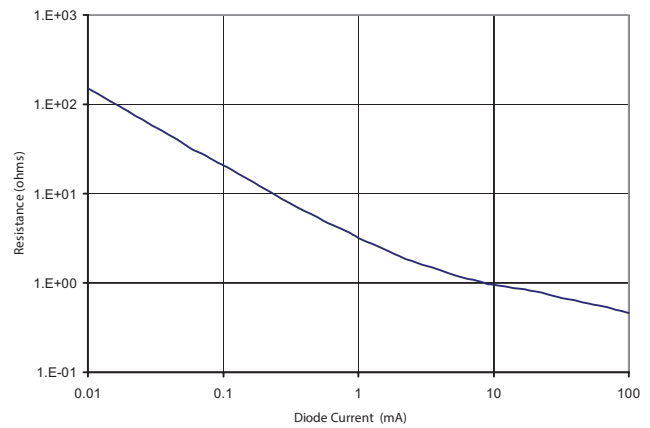
Isolation



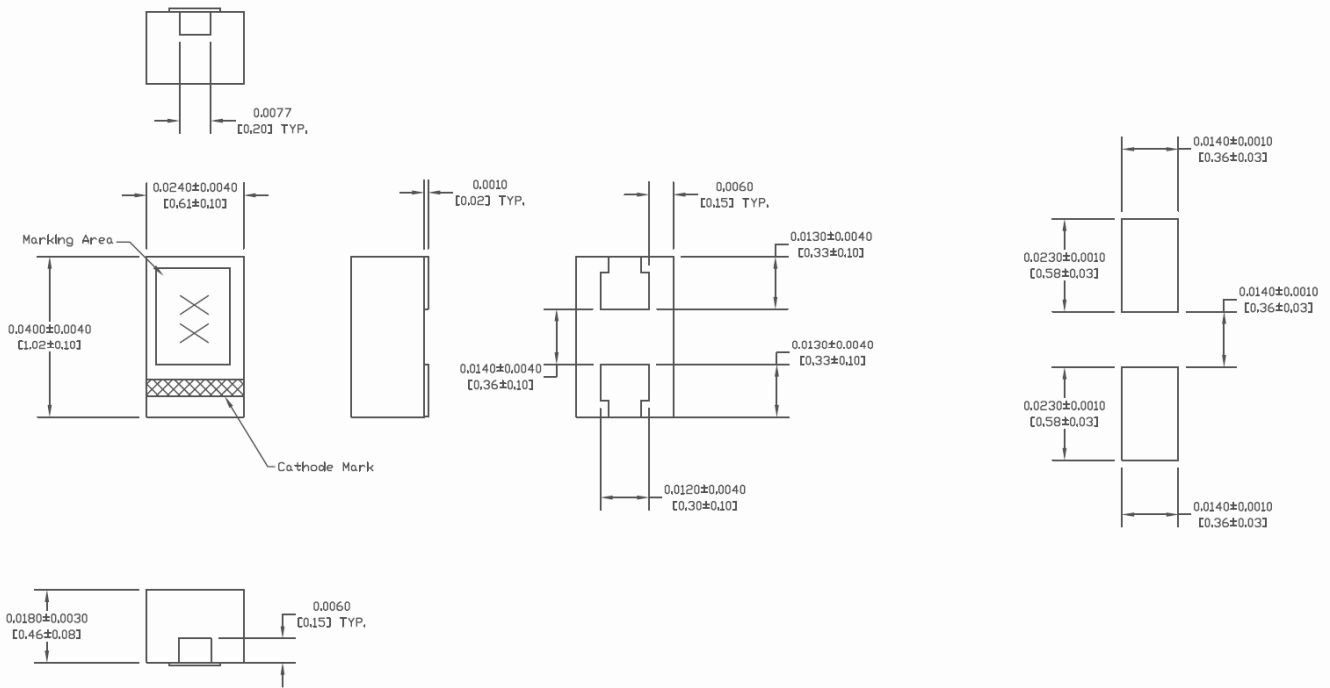
Input Return Loss



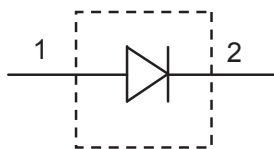
Series Resistance vs. Current



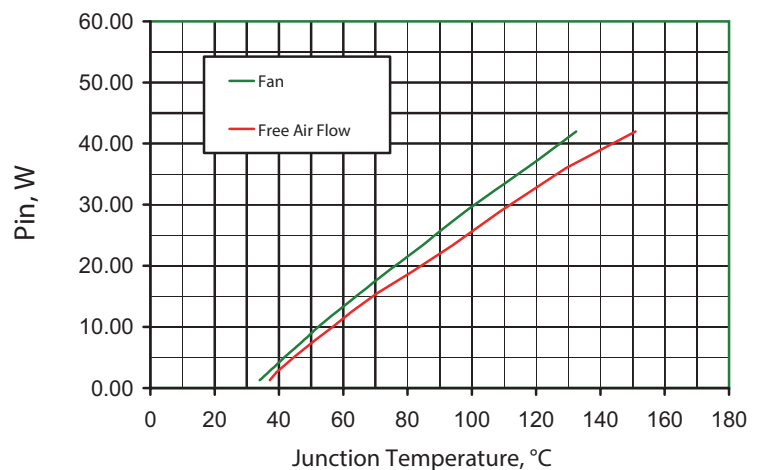
Package Outline (0402) and PCB Layout



Electrical Schematic



Junction Temperature vs Pin Mounted on Heatsink 25°C Amb 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.