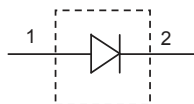
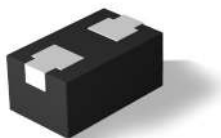


MSWSE-010-15S

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

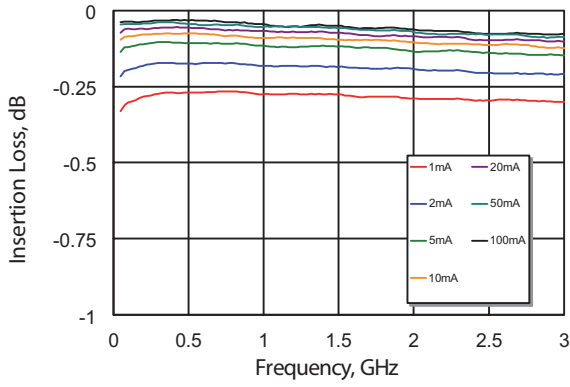
RATING	LIMITS	UNITS
V_R	200	V
I_F	200	mA
θ_{JC}	35	°C/W
T_J	+175	°C
T_{STG}	-55 to +150	°C
T_{SOLDER}	+260 °C per JEDEC J-STD-20C	

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

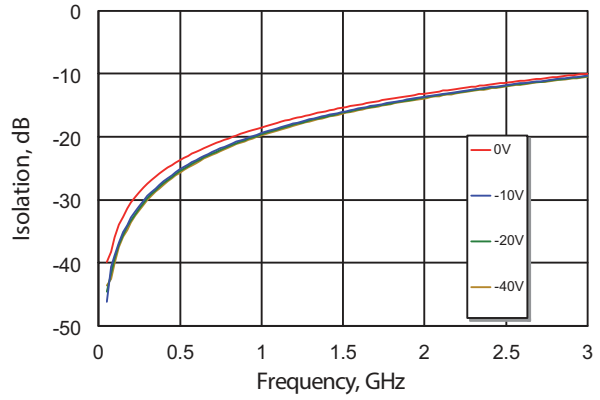
SYMBOL	TEST CONDITIONS	MIN	TYPICAL	MAX	UNITS	
V_{BR}	$I_R = 10\ \mu\text{A}$	200	–	–	V	
V_F	$I_F = 50\ \text{mA}$	–	870	950	mV	
C_J	$V_R = -50\ \text{V}$ $F = 1\ \text{MHz}$	–	0.13	–	pF	
C_T	$V_R = -50\ \text{V}$ $F = 1\ \text{MHz}$	–	0.17	0.22	pF	
R_S	$I_F = 30\ \text{mA}$ $F = 500\ \text{MHz}$	–	0.8	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



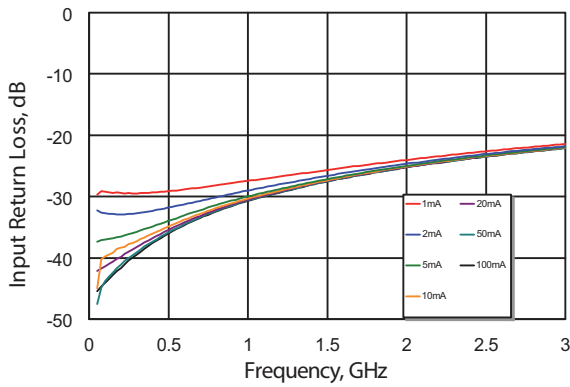
Insertion Loss



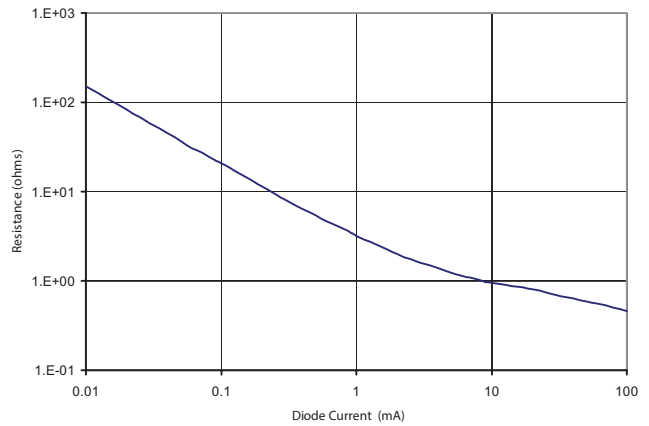
Isolation



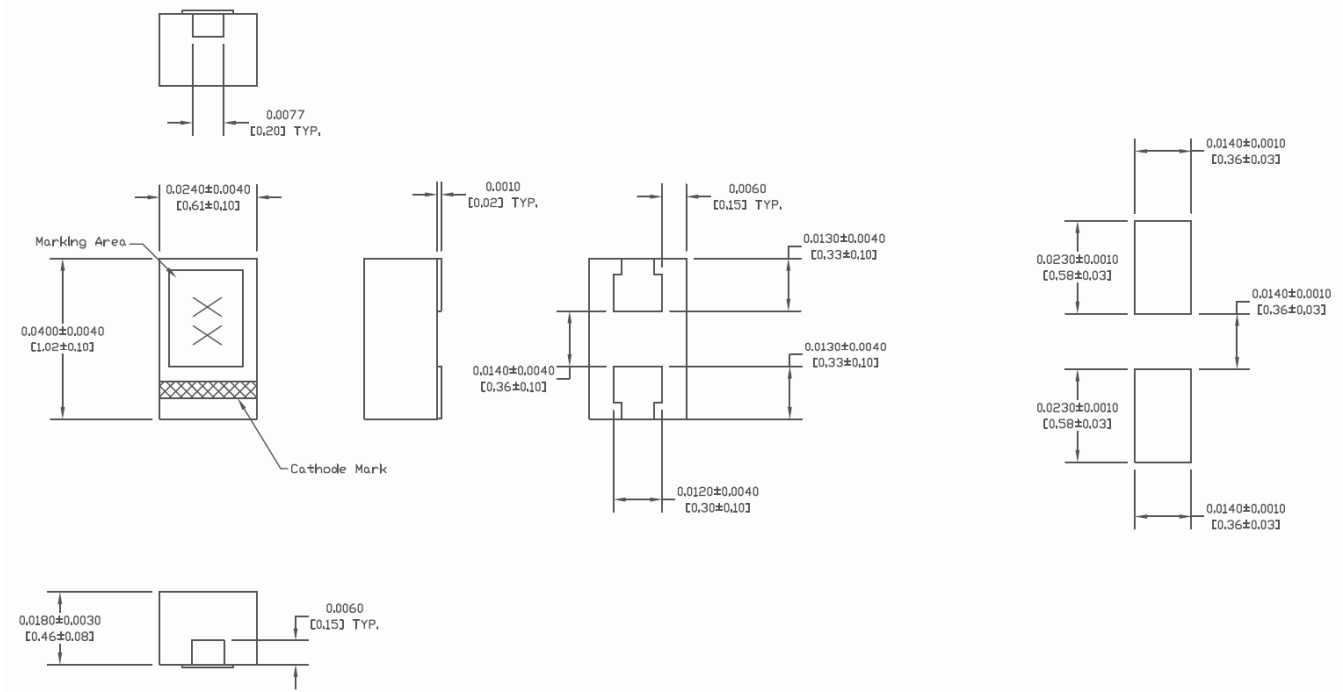
Input Return Loss



Series Resistance vs. Current



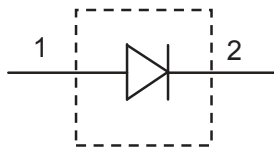
Package Outline (0402) and PCB Layout



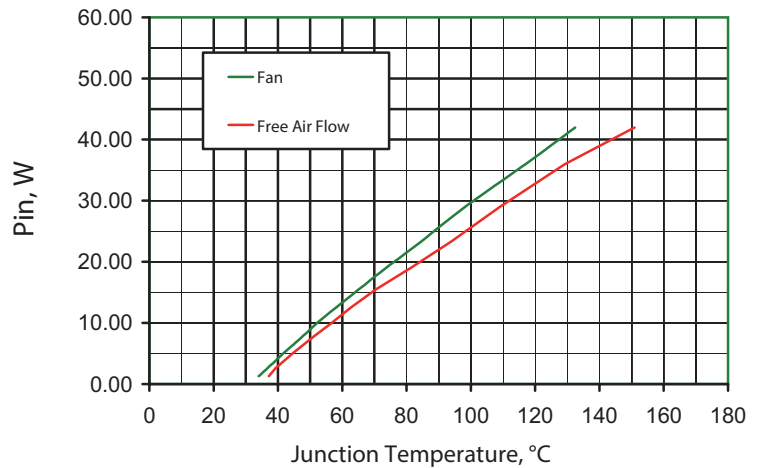
Dimensions: inches [mm]

Finish: 300 micro inches matte Tin, annealed 1 hour at 150° C

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.