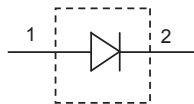
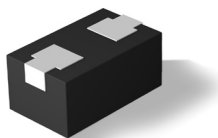


MSWSE-010-16S

Silicon PIN Diode Switch Element



0402P
(Molded Plastic DFN Package)

Description

The MSWSE-010-16S 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 0.25 dB typical up to 3.0 GHz
- Cost effective choice for switch applications

Maximum Ratings

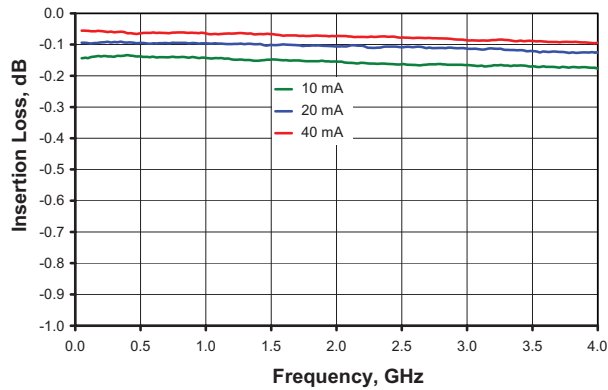
RATING	LIMITS	UNITS
V_R	200	V
I_F	200	mA
θ_{JC}	30	°C/W
T_J	+175	°C
T_{STG}	-55 to +150	°C
T_{SOLDER}	+260 °C per JEDEC J-STD-20C	

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

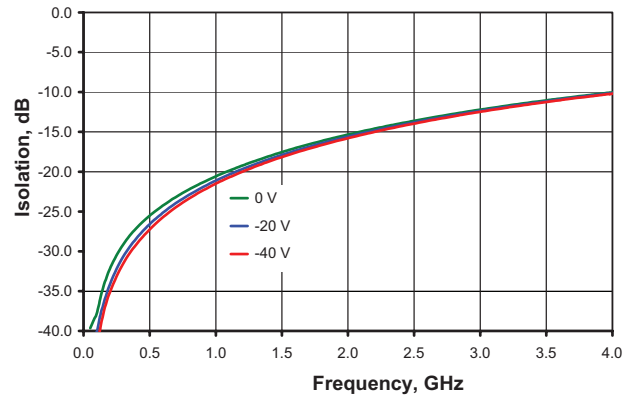
SYMBOL	TEST CONDITIONS	MIN	TYPICAL	MAX	UNITS	
V_{BR}	$I_R = 10\ \mu A$	250	-	-	V	
V_F	$I_F = 50\ mA$	-	870	950	mV	
C_J	$V_R = -50\ V$ $F = 1\ MHz$	-	0.15	0.2	pF	
R_S	$I_F = 30\ mA$ $F = 500\ MHz$	-	1.0	1.3	Ω	
	$I_F = 100\ mA$ $F = 500\ MHz$	-	0.7	0.9	Ω	
τ	$I_F = 10\ mA$ $I_R = 6\ mA$ measured at 50%	-	1000	1500	ns	
W	I-Layer	-	40	-	μm	
IL	$I_F = 50\ mA$	$F < 1.0\ GHz$	-	0.6	-	dB
		$F < 2.0\ GHz$	-	0.8	0.20	dB
IRL / ORL	$I_F = 50\ mA$	$F < 1.0\ GHz$	25	34	-	dB
		$F < 2.0\ GHz$	23	28	-	dB
Iso	$V_R = 10\ V$	$F < 1.0\ GHz$	15	20	-	dB
		$F < 2.0\ GHz$	-	14	-	dB



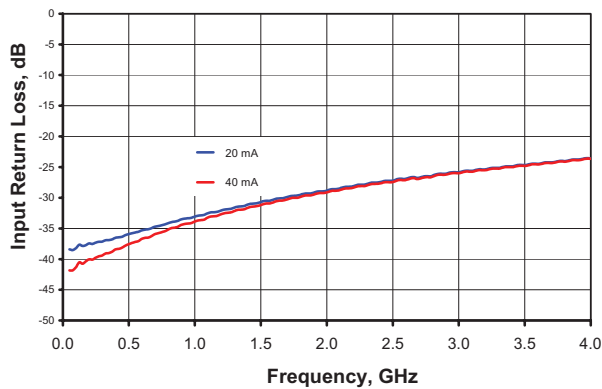
Insertion Loss



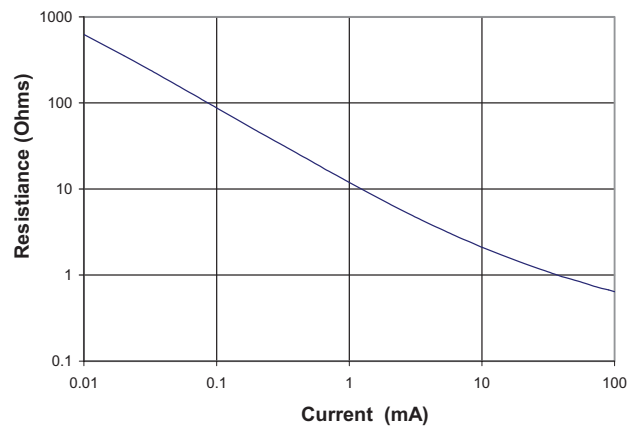
Isolation



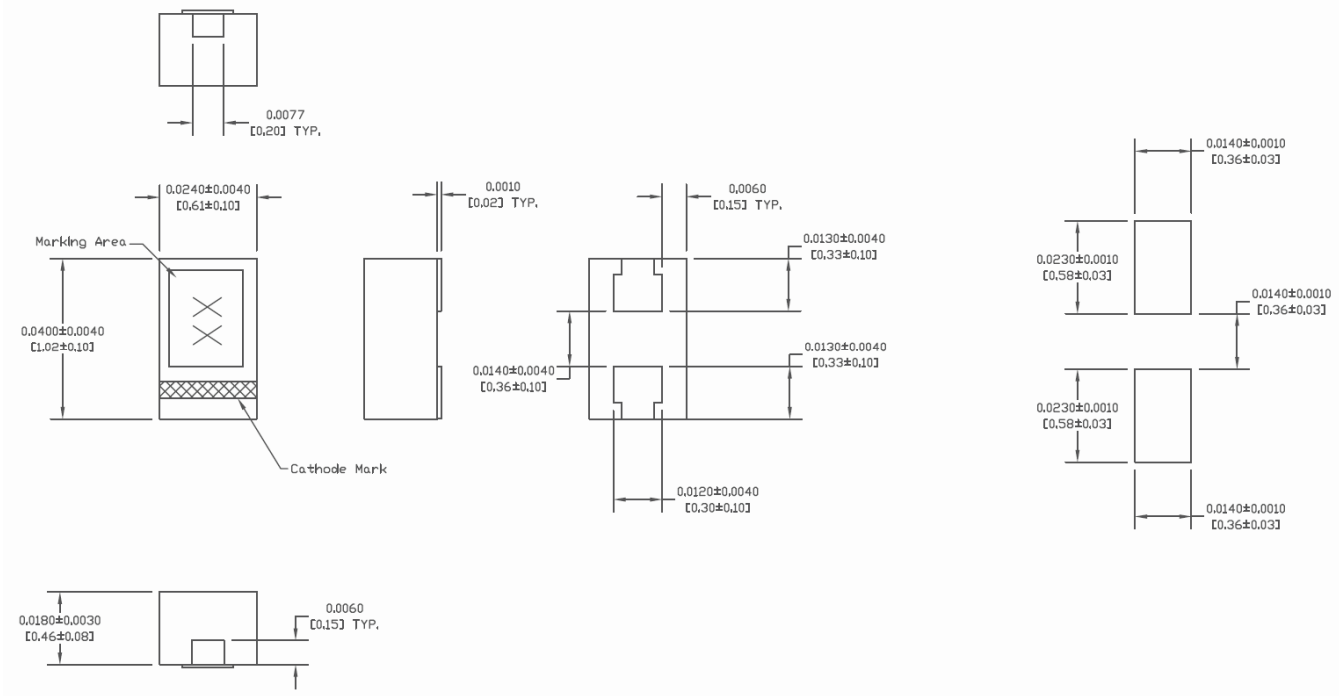
Input Return Loss



Series Resistance vs. Current



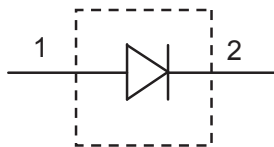
Package Outline (0402) and PCB Layout



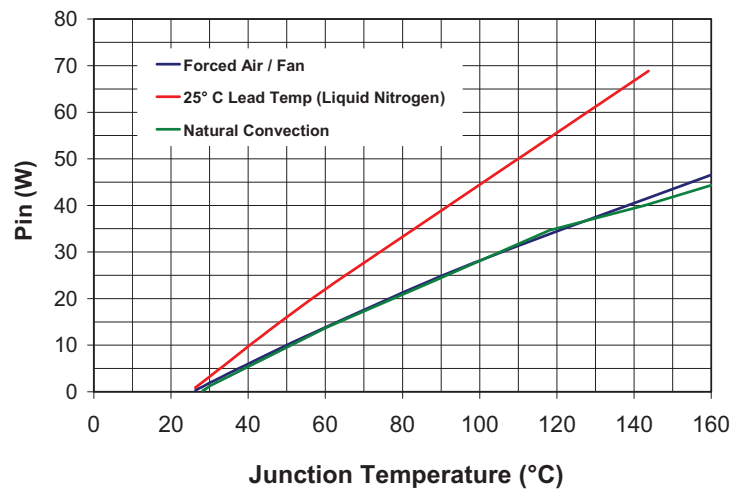
Dimensions: inches [mm]

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.