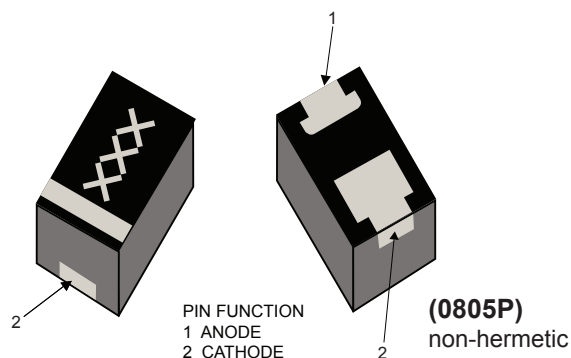


MSWSE-044-10

Silicon PIN Diode Switch Element



Description

The MSWSE-044-010 is a PIN diode SPST switch element designed for medium incident power applications, up to 40W C.W. It has low insertion loss and medium isolation below 2.0 GHz.

Features

- Broadband performance up to 2.0 GHz
- Cost effective choice for switch applications

Maximum Ratings

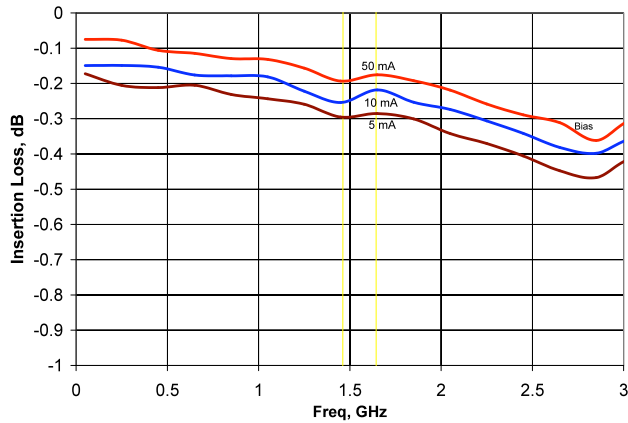
RATING	LIMITS	UNITS
V_R	300	V
I_F	200	mA
θ_{JC}	20	°C / W
T_J	+175	°C
T_{STG}	-55 to +150	°C
T_{SOLDER}	+260 °C per JEDEC STD-J-20C	

Electrical Characteristics, $T_c = +25\text{ °C}$

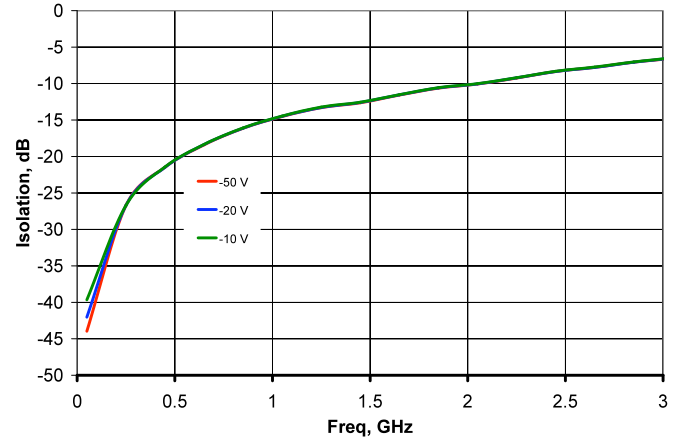
SYMBOL	TEST CONDITIONS			MIN	TYPICAL	MAX	UNITS
V_{BR}	$I_R = 10\text{ }\mu\text{A}$			300	–	–	V
V_F	$I_F = 50\text{ mA}$			–	900	1000	mV
C_T	$V_R = 10\text{ V}$	$F = 1\text{ MHz}$		–	0.30	0.40	pF
R_S	$I_F = 100\text{ mA}$	$F = 500\text{ MHz}$		–	0.5	0.70	Ω
τ	$I_F = 10\text{ mA}$	$I_R = 6\text{ mA}$	measured at 50%	–	1200	–	ns
W	I - Layer			–	40	–	μm
I_L	$I_F = 10\text{ mA}$	$F < 1.0\text{ GHz}$		–	0.20	0.30	dB
		$F < 2.0\text{ GHz}$		–	0.25	0.35	dB
I_{50}	$V_R = 50\text{ V}$	$F < 1.0\text{ GHz}$		11	14	–	dB
		$F < 2.0\text{ GHz}$		–	10	–	dB



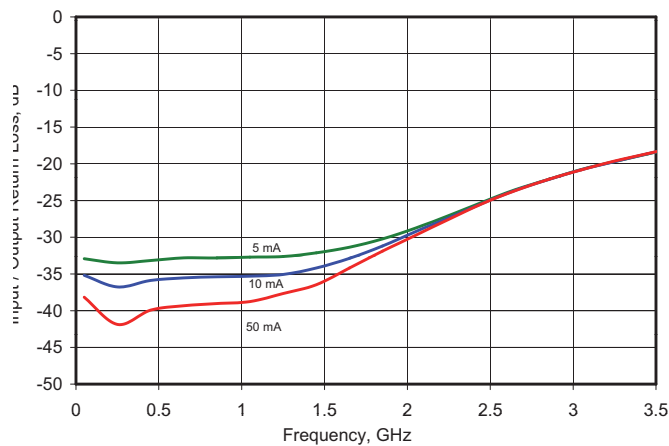
Insertion Loss



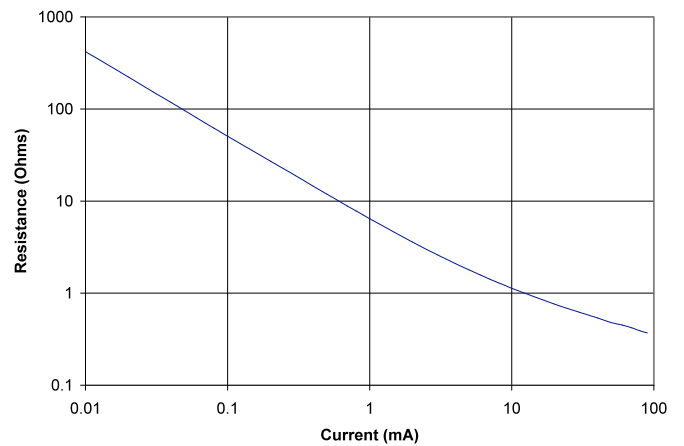
Isolation



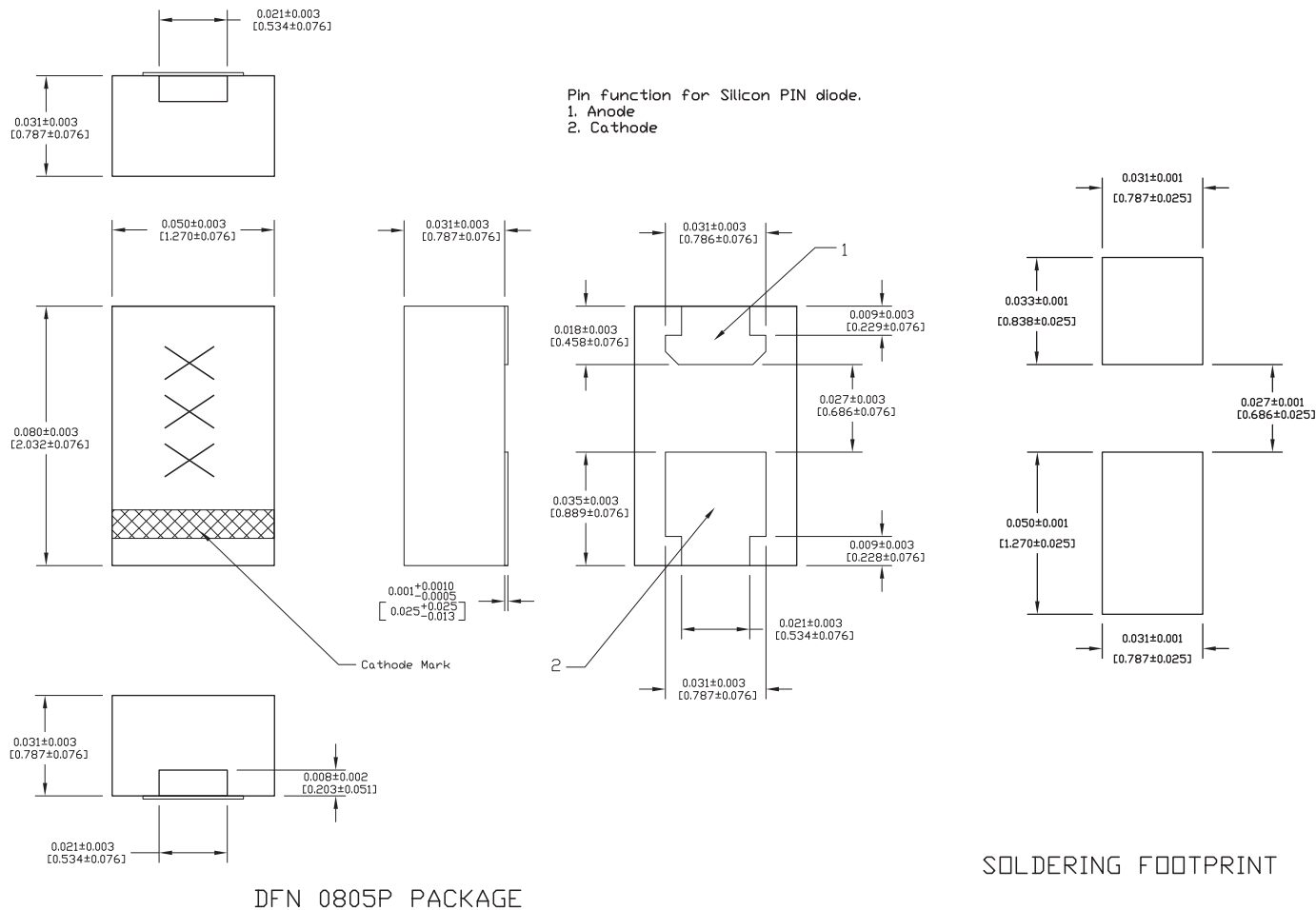
Input Return Loss



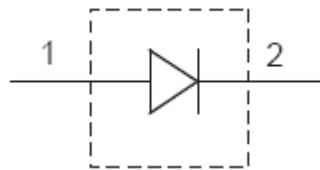
Series Resistance vs. Current



Package Outline



Schematic



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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.