ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum forward voltage drop See fig. 1	V_{FM} (1)	1 A	T_J = 25 °C	0.54	V
		1.5 A		0.62	
		1 A	T_J = 125 °C	0.49	
		1.5 A		0.56	
Maximum reverse leakage current See fig. 2	I_{RM} (1)	T_J = 25 °C	V_R = Rated V_R	0.5	mA
		T_J = 125 °C		26	
Threshold voltage	$V_{F(TO)}$	T_J = T_J maximum		0.36	V
Forward slope resistance	r_t			104	mΩ
Typical junction capacitance	C_T	V_R = 10 V_{DC}, T_J = 25 °C, test signal = 1 MHz		38	pF
Typical series inductance	L_S	Measured lead to lead 5 mm from package body		2.0	nH
Maximum voltage rate of change	dV/dt	Rated V_R		10 000	V/µs

Note

(1) Pulse width < 300 µs, duty cycle < 2 %

THERMAL - MECHANICAL SPECIFICATIONS

PARAMETER	SYMBOL	TEST CONDITIONS	VALUES	UNITS
Maximum junction and storage temperature range	T_J (1), T_{Stg}		- 55 to 150	°C
Maximum thermal resistance, junction to ambient	R_{thJA}	DC operation	80	°C/W
Approximate weight			0.07	g
			0.002	oz.
Marking device		Case style SMA (similar D-64)	V1F	

Note

(1) $\frac{dP_{tot}}{dT_J} < \frac{1}{R_{thJA}}$ thermal runaway condition for a diode on its own heatsink

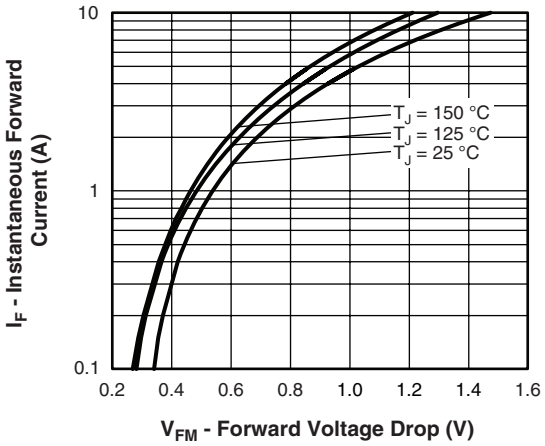


Fig. 1 - Maximum Forward Voltage Drop Characteristics

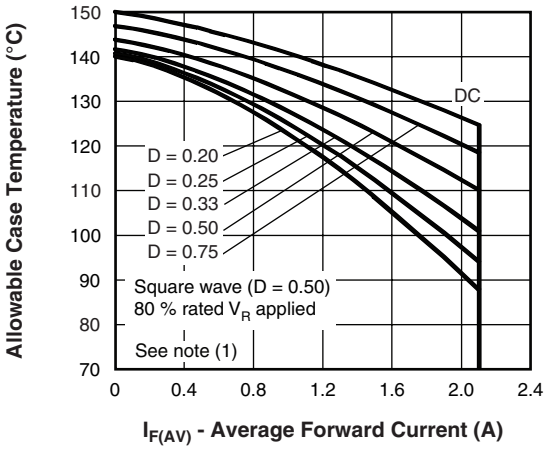


Fig. 4 - Maximum Average Forward Current vs. Allowable Lead Temperature

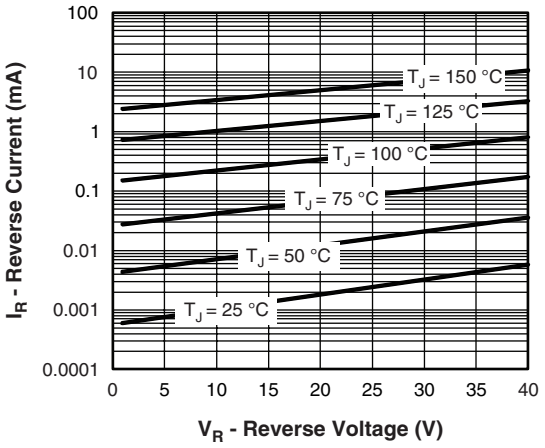


Fig. 2 - Typical Peak Reverse Current vs. Reverse Voltage

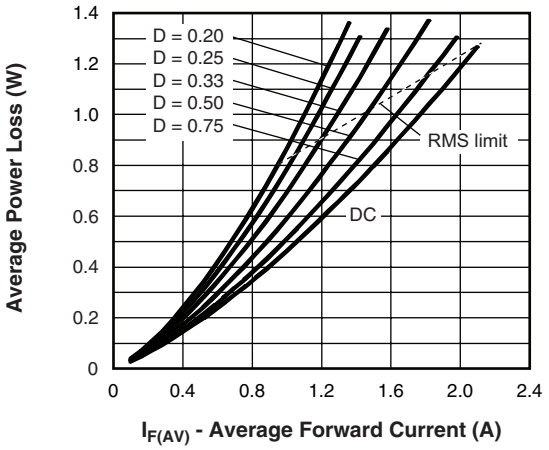


Fig. 5 - Maximum Average Forward Dissipation vs. Average Forward Current

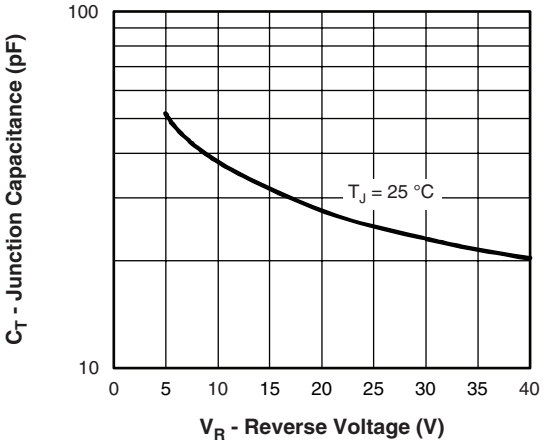


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage

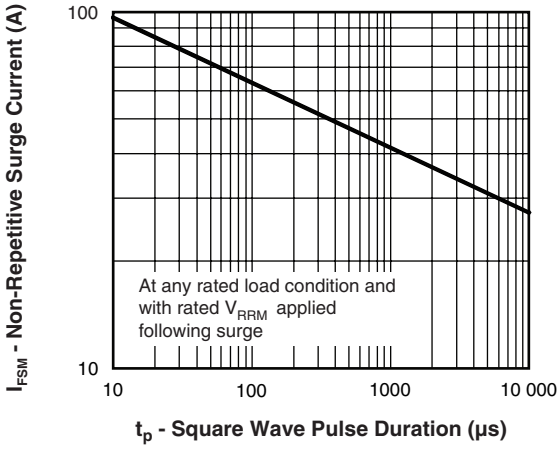


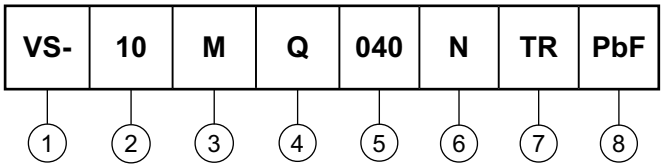
Fig. 6 - Maximum Peak Surge Forward Current vs. Pulse Duration

Note

(1) Formula used: $T_C = T_J - (Pd + Pd_{REV}) \times R_{thJC}$;
Pd = Forward power loss = $I_{F(AV)} \times V_{FM}$ at ($I_{F(AV)}$/D) (see fig. 6); Pd_{REV} = Inverse power loss = $V_{R1} \times I_R$ (1 - D); I_R at V_{R1} = 80 % rated V_R

ORDERING INFORMATION TABLE

Device code



1 - HPP product suffix

2 - Current rating

3 - M = SMA

4 - Q = Schottky “Q” series

5 - Voltage rating (040 = 40 V)

6 - N = New SMA

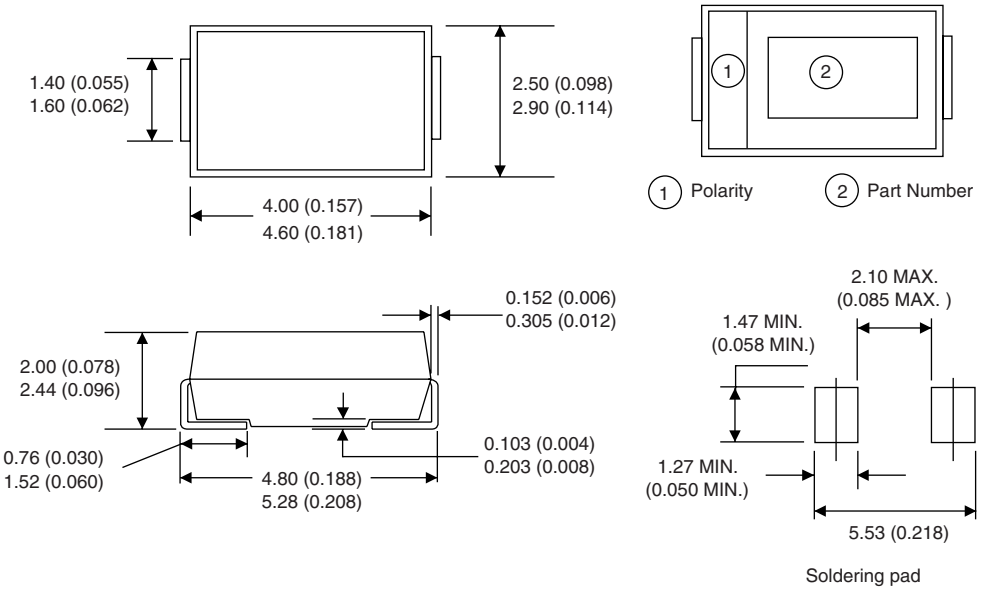
7 - • None = Box (1000 pieces)
• TR = Tape and reel (7500 pieces)

8 - PbF = Lead (Pb)-free

LINKS TO RELATED DOCUMENTS		
Dimensions		www.vishay.com/doc?95018
Part marking information		www.vishay.com/doc?95029
Packaging information	Tape and reel	www.vishay.com/doc?95034
	Bulk	www.vishay.com/doc?95397
SPICE model		www.vishay.com/doc?95277

SMA

DIMENSIONS in millimeters (inches)



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