ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum forward voltage drop See fig. 1	V_{FM} (1)	1 A	T_J = 25 °C	0.42	V
		2 A		0.49	
		1 A	T_J = 125 °C	0.34	
		2 A		0.43	
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		20	
Threshold voltage	$V_{F(TO)}$	T_J = T_J maximum		0.26	V
Forward slope resistance	r_t			64.6	mΩ
Typical junction capacitance	C_T	V_R = 10 V_{DC}, T_J = 25 °C, test signal = 1 MHz		134	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}		- 40 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)	V3F	

Note

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

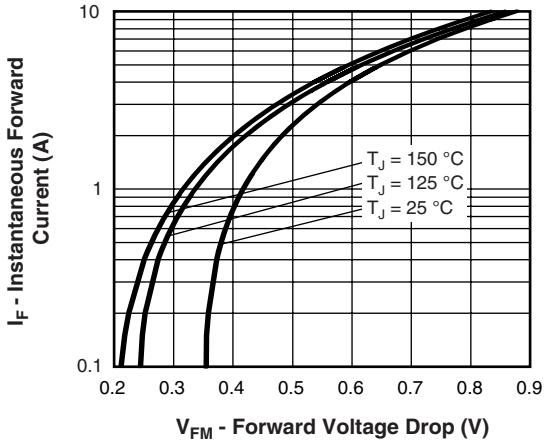

Fig. 1 - Maximum Forward Voltage Drop Characteristics

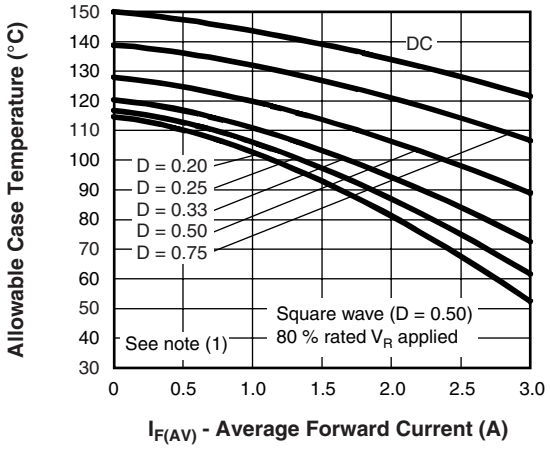

Fig. 4 - Maximum Average Forward Current vs. Allowable Lead Temperature

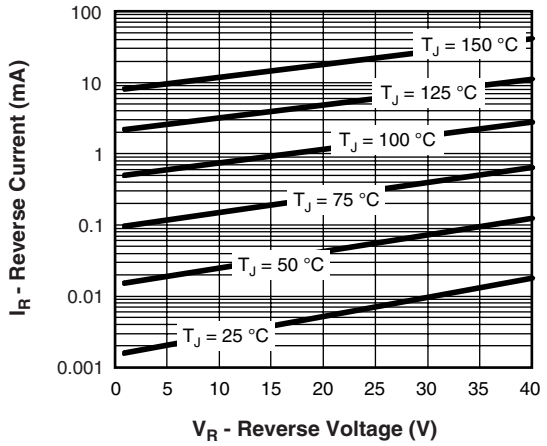

Fig. 2Typical Peak Reverse Current vs. Reverse Voltage

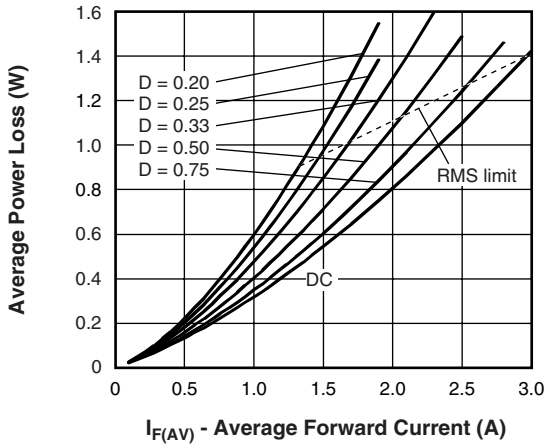

Fig. 5Maximum Average Forward Dissipation vs. Average Forward Current

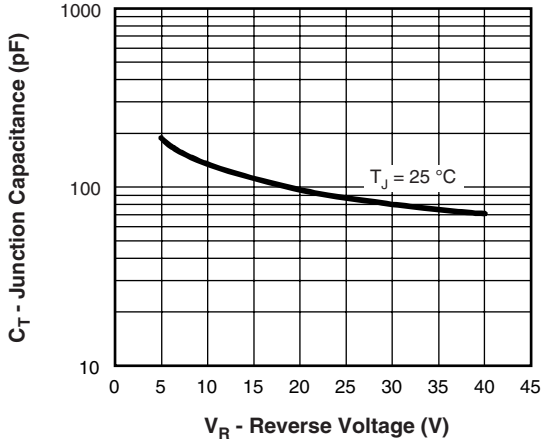

Fig. 3Typical Junction Capacitance vs. Reverse Voltage

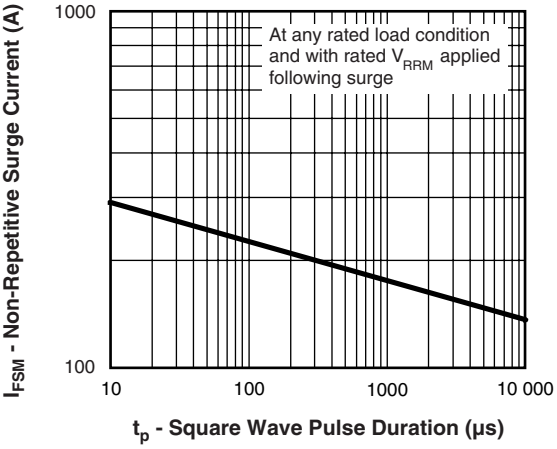

Fig. 6Maximum Peak Surge Forward Current vs. Pulse Duration

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

15	M	Q	040	N	TR	PbF
1	2	3	4	5	6	7

- 1 - Current rating
- 2 - M = SMA
- 3 - Q = Schottky “Q” series
- 4 - Voltage rating (040 = 40 V)
- 5 - N = New SMA
- 6 - • None = Box (1000 pieces)
  • TR = Tape and reel (7500 pieces)
- 7 - • None = Standard production
  • PbF = Lead (Pb)-free

LINKS TO RELATED DOCUMENTS	
Dimensions	http://www.vishay.com/doc?95018
Part marking information	http://www.vishay.com/doc?95029
Packaging information	http://www.vishay.com/doc?95034
SPICE model	http://www.vishay.com/doc?95273

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