ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum forward voltage drop per leg See fig. 1	V_{FM} (1)	1 A	T_J = 25 °C	0.54	V
		2 A		0.67	
		1 A	T_J = 125 °C	0.50	
		2 A		0.65	
Maximum reverse leakage current per leg See fig. 2	I_{RM} (1)	T_J = 25 °C	V_R = Rated V_R	0.1	mA
		T_J = 125 °C		10	
Typical junction capacitance per leg	C_T	V_R = 5 V_{DC} (test signal range 100 kHz to 1 MHz) 25 °C		70	pF
Typical series inductance per leg	L_S	Measured lead to lead 5 mm from package body		6	nH
Maximum voltage rate of change	dV/dt	Rated V_R		7700	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	65	°C/W
Maximum thermal resistance, junction to lead	R_{thJL}		25	
Approximate weight			0.13	g
			0.0045	oz.
Marking device		Case style SOT-223	2CJQF	

Note

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

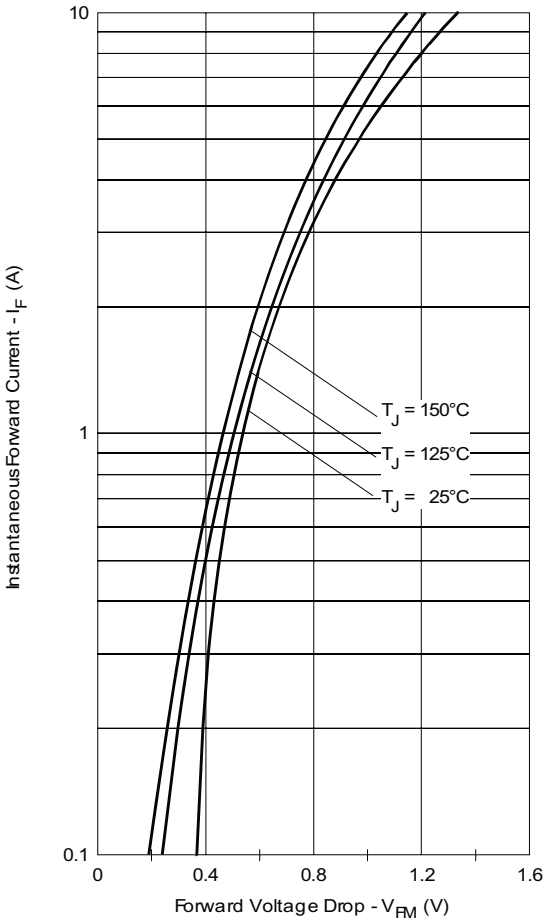

Fig. 1 - Maximum Forward Voltage Drop Characteristics (Per Leg)

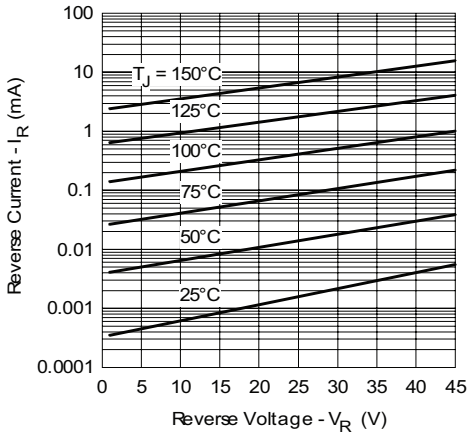

Fig. 2 - Typical Values of Reverse Current vs. Reverse Voltage (Per Leg)

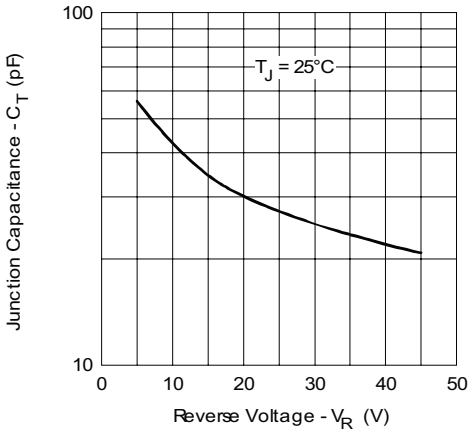

Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage (Per Leg)

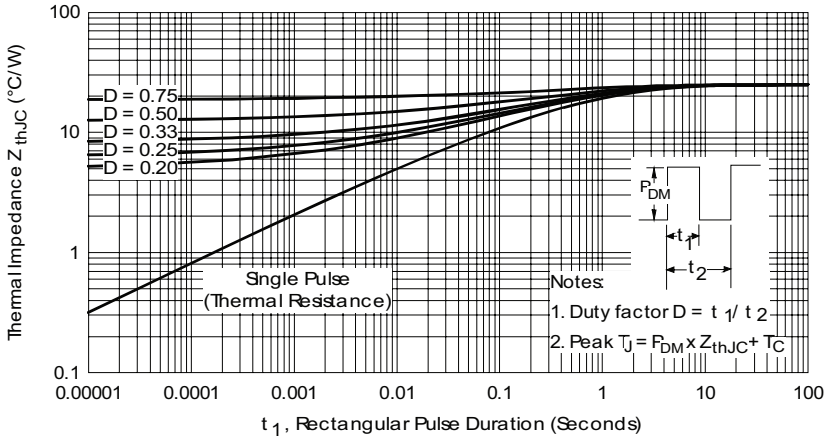

Fig. 4 - Maximum Thermal Impedance Z_{thJC} Characteristics (Per Leg)

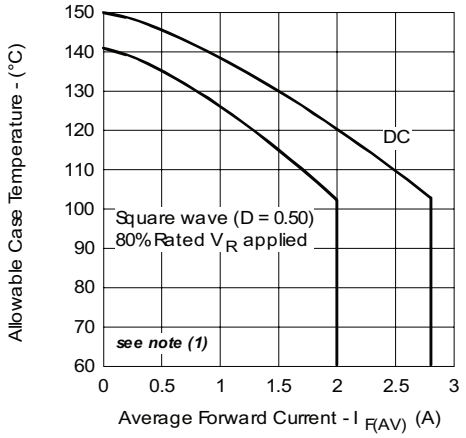

Fig. 5 - Maximum Allowable Case Temperature vs. Average Forward Current (Per Leg)

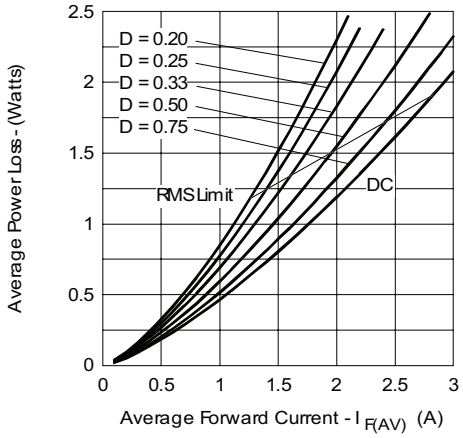

Fig. 6 - Forward Power Loss Characteristics (Per Leg)

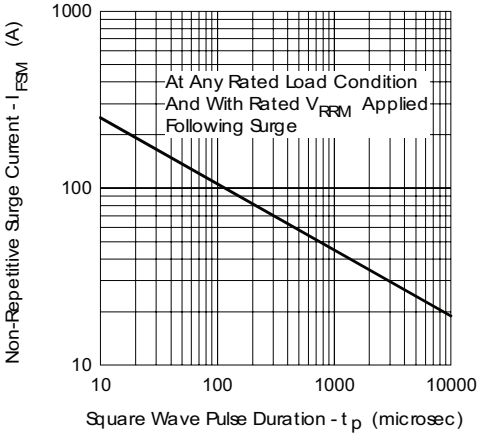

Fig. 7 - Maximum Non-Repetitive Surge Current (Per Leg)

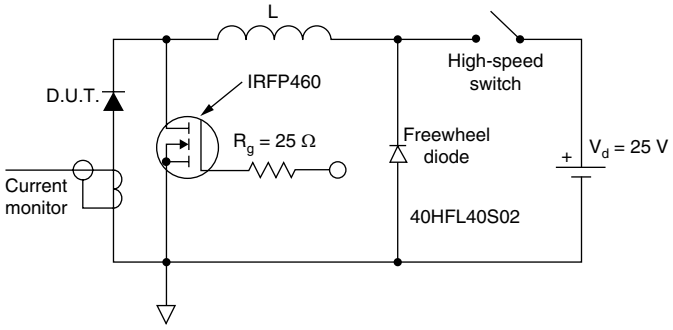

Fig. 8 - Unclamped Inductive Test Circuit

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

2	0	C	J	Q	045	-
1	2	3	4	5	6	7

1 - Current rating (2 = 2 A)

2 - Schottky rectifier series

3 - Circuit configuration:
C = Common cathode

4 - Package:
J = SOT-223

5 - Schottky “Q” series

6 - Voltage rating (045 = 45 V)

7 - • None = Standard production
• PbF = Lead (Pb)-free

LINKS TO RELATED DOCUMENTS	
Dimensions	http://www.vishay.com/doc?95022
Part marking information	http://www.vishay.com/doc?95031
Packaging information	http://www.vishay.com/doc?95035

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