

ELECTRICAL SPECIFICATIONS					
PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum forward voltage drop per leg See fig. 1	$V_{FM}^{(1)}$	1 A	$T_J = 25\text{ }^{\circ}\text{C}$	0.54	V
		2 A		0.67	
		1 A	$T_J = 125\text{ }^{\circ}\text{C}$	0.50	
		2 A		0.65	
Maximum reverse leakage current per leg See fig. 2	$I_{RM}^{(1)}$	$T_J = 25\text{ }^{\circ}\text{C}$	$V_R = \text{Rated } V_R$	0.1	mA
		$T_J = 125\text{ }^{\circ}\text{C}$		10	
Typical junction capacitance per leg	C_T	$V_R = 5\text{ }V_{DC}$ (test signal range 100 kHz to 1 MHz) $25\text{ }^{\circ}\text{C}$		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/ μ s

Note(1) Pulse width < 300 μ s, 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

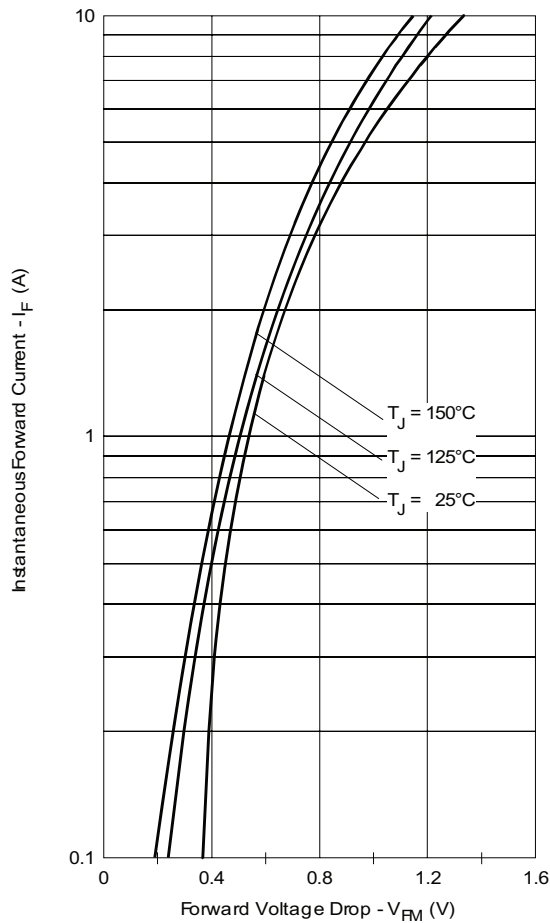


Fig. 1 - Maximum Forward Voltage Drop Characteristics (Per Leg)

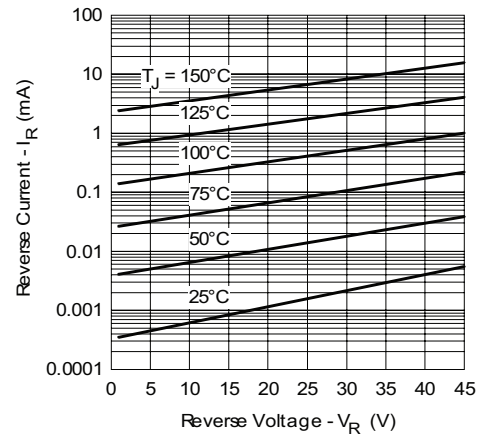


Fig. 2 - Typical Values of Reverse Current vs. Reverse Voltage (Per Leg)

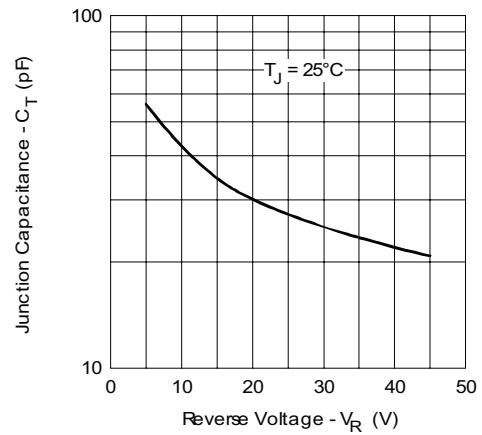


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage (Per Leg)

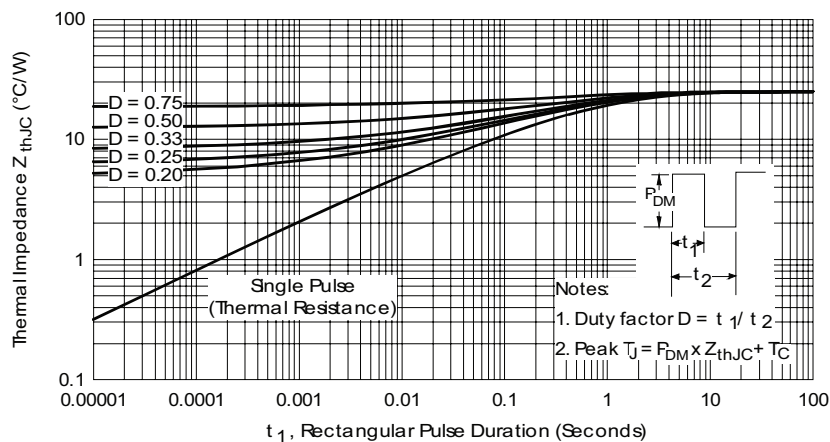


Fig. 4 - Maximum Thermal Impedance Z_{thJC} Characteristics (Per Leg)

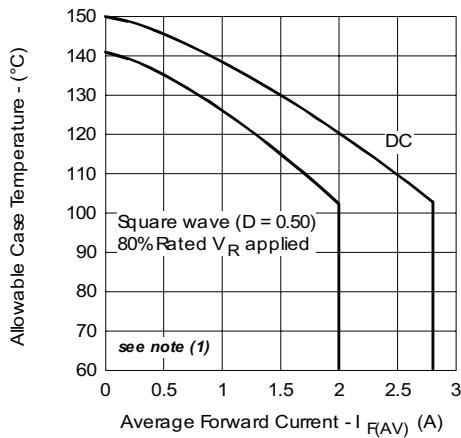


Fig. 5 - Maximum Allowable Case Temperature vs. Average Forward Current (Per Leg)

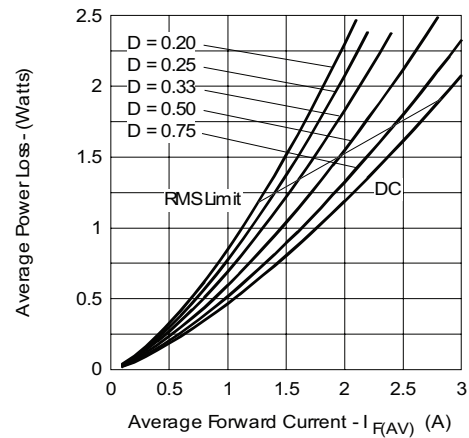


Fig. 6 - Forward Power Loss Characteristics (Per Leg)

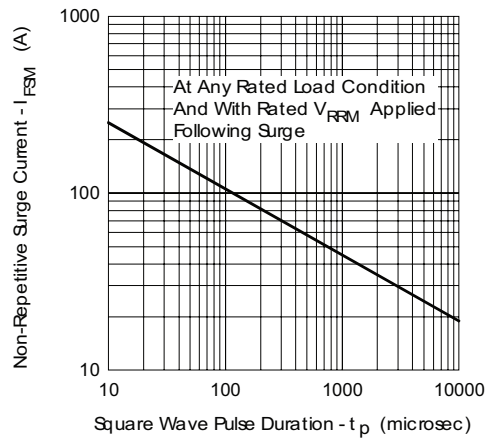


Fig. 7 - Maximum Non-Repetitive Surge Current (Per Leg)

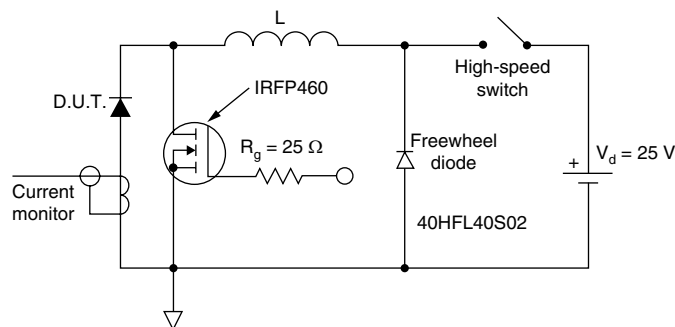


Fig. 8 - Unclamped Inductive Test Circuit

Note

- (1) Formula used: $T_C = T_J - (P_d + P_{dREV}) \times R_{thJC}$;
 P_d = Forward power loss = $I_{F(AV)} \times V_{FM}$ at $(I_{F(AV)}/D)$ (see fig. 6);
 P_{dREV} = 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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