



ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Instantaneous forward voltage	$I_F = 5.0\text{ A}$	$T_A = 25\text{ }^\circ\text{C}$	$V_F^{(1)}$	0.38	-	V
	$I_F = 7.5\text{ A}$			0.41	-	
	$I_F = 15\text{ A}$			0.48	0.56	
	$I_F = 5.0\text{ A}$	$T_A = 125\text{ }^\circ\text{C}$		0.26	-	
	$I_F = 7.5\text{ A}$			0.31	-	
	$I_F = 15\text{ A}$			0.41	0.50	
Reverse current	$V_R = 50\text{ V}$	$T_A = 25\text{ }^\circ\text{C}$	$I_R^{(2)}$	140	3000	μA
		$T_A = 125\text{ }^\circ\text{C}$		60	140	mA

Notes

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
(2) Pulse test: Pulse width $\leq 5\text{ ms}$

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	V15PN50	UNIT
Typical thermal resistance	$R_{\theta JA}^{(1)(2)}$	70	$^\circ\text{C/W}$
	$R_{\theta JM}^{(3)}$	4	

Notes

- (1) Free air, mounted on recommended copper pad area; thermal resistance $R_{\theta JA}$ - junction to ambient
(2) The heat generated must be less than the thermal conductivity from junction-to-ambient: $dP_D/dT_J < 1/R_{\theta JA}$
(3) Mounted on 30 mm x 30 mm 2 oz. pad PCB; thermal resistance $R_{\theta JM}$ - junction to mount measured at cathode side

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
V15PN50-M3/86A	0.10	86A	1500	7" diameter plastic tape and reel
V15PN50-M3/87A	0.10	87A	6500	13" diameter plastic tape and reel

RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

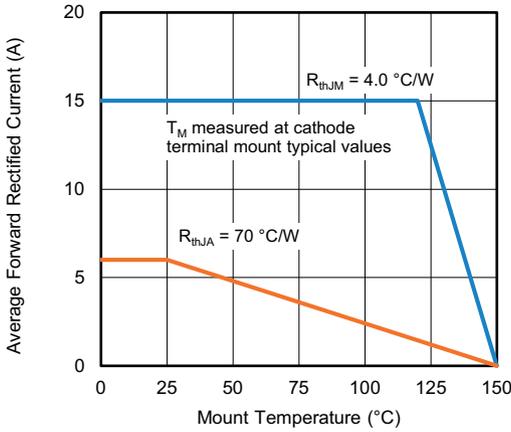


Fig. 1 - Maximum Forward Current Derating Curve (D = Duty Cycle = 0.5)

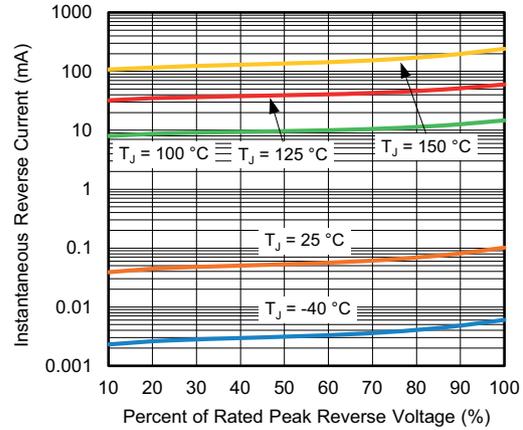


Fig. 4 - Typical Reverse Leakage Characteristics

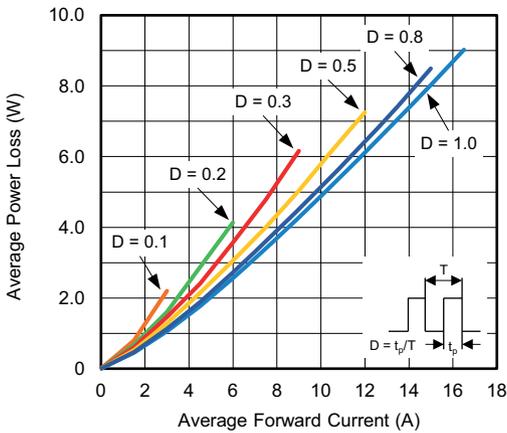


Fig. 2 - Forward Power Loss Characteristics

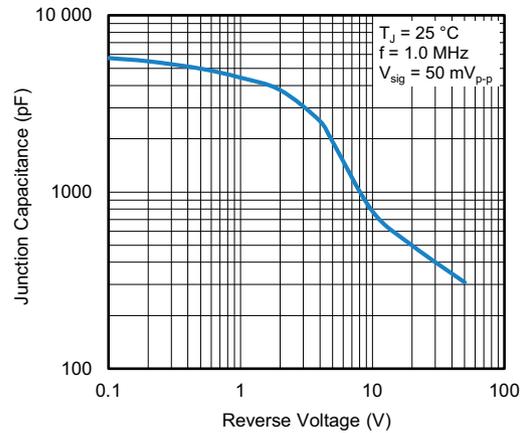


Fig. 5 - Typical Junction Capacitance

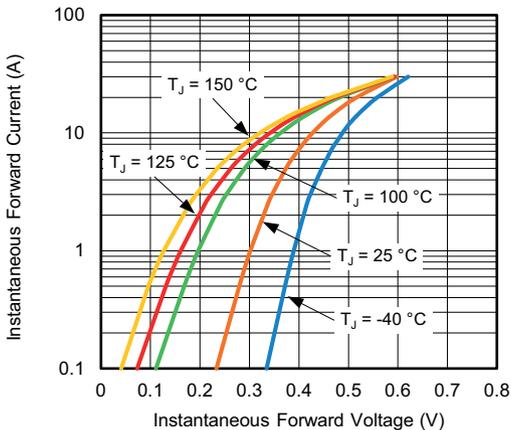


Fig. 3 - Typical Instantaneous Forward Characteristics

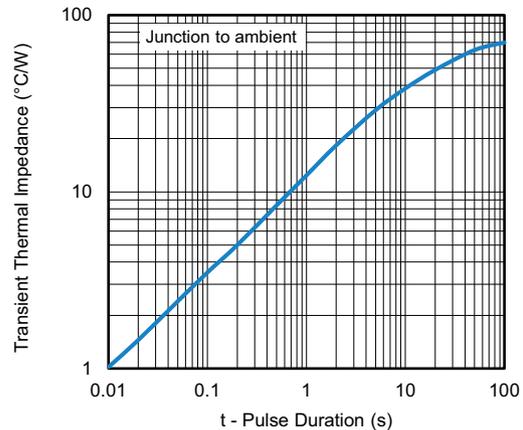
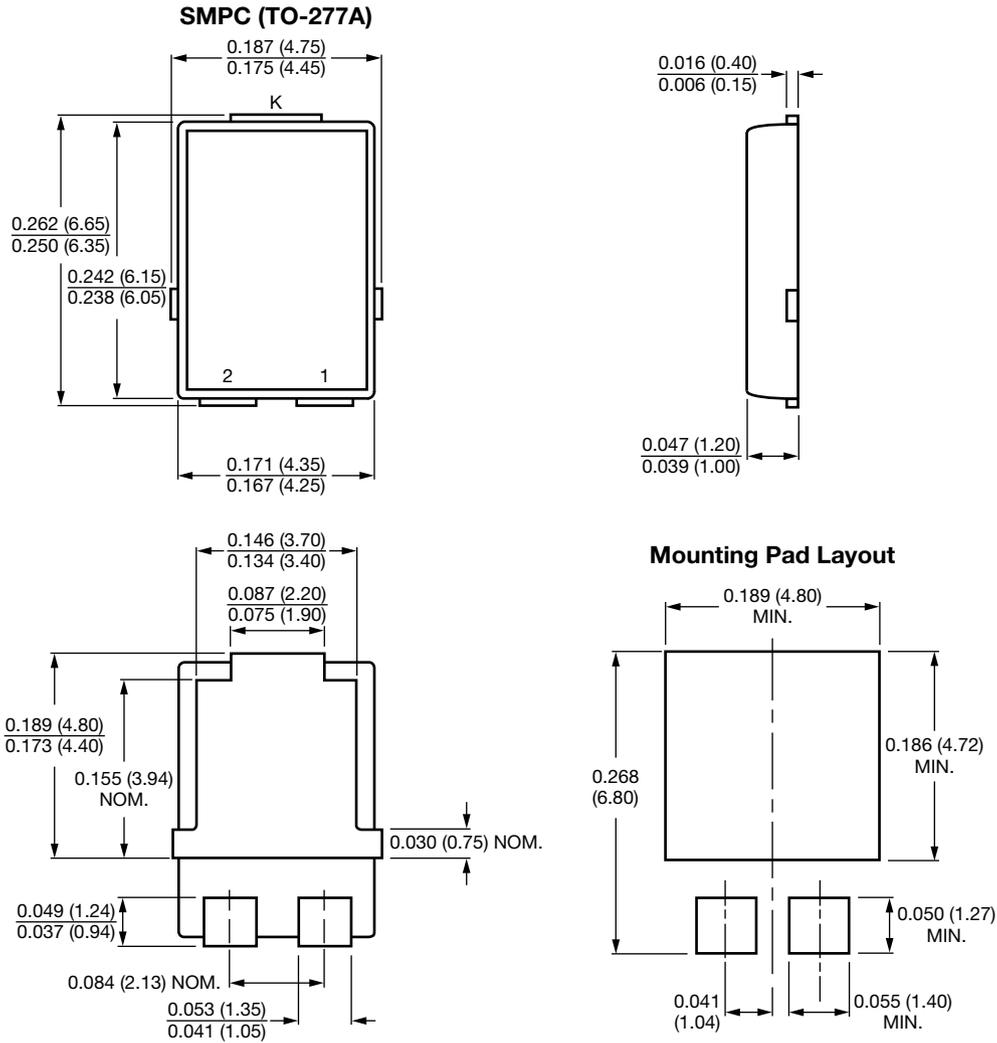


Fig. 6 - Typical Transient Thermal Impedance



PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



Conform to JEDEC® TO-277A



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