ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Instantaneous forward voltage	I_F = 6 A	T_A = 25 °C	V_F (1)	0.43	-	V
	I_F = 12 A			0.50	0.60	
	I_F = 6 A	T_A = 125 °C		0.33	-	
	I_F = 12 A			0.43	0.52	
Reverse current	V_R = 40 V	T_A = 25 °C	I_R (2)	100	800	µA
		T_A = 125 °C		50	100	mA
Typical junction capacitance	4.0 V, 1 MHz		C_J	750	-	pF

Notes

(1) Pulse test: 300 µs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Typical thermal resistance	$R_{\theta JA}$ (1)	100	°C/W
	$R_{\theta JM}$ (2)	3	

Notes

(1) Free air, mounted on recommended copper pad area. Thermal resistance $R_{\theta JA}$ - junction to ambient.

(2) Mounted on 30 mm x 30 mm Al PCB with 50 mm x 25 mm x 100 mm fin heat sink. Thermal resistance $R_{\theta JM}$ - junction to mount.

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
SS12P4S-M3/86A	0.10	86A	1500	7" diameter plastic tape and reel
SS12P4S-M3/87A	0.10	87A	6500	13" diameter plastic tape and reel

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

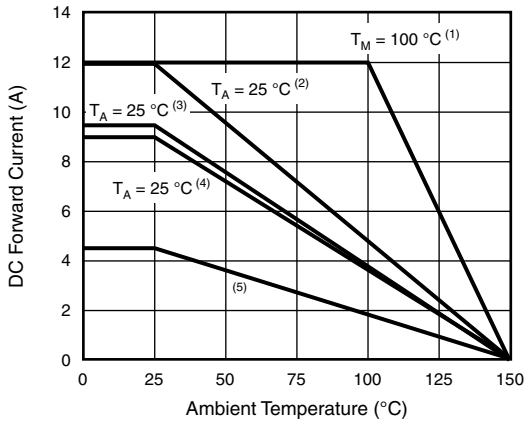


Fig. 1 - Maximum Current Derating Curve

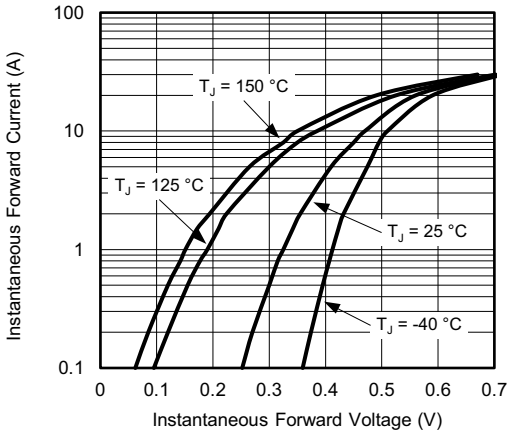


Fig. 3 - Typical Instantaneous Forward Characteristics

Notes

(1) Mounted on 30 mm x 30 mm Al PCB with 50 mm x 25 mm x 100 mm fin heat sink, T_M measured at the terminal of cathode band

(2) Mounted on 30 mm x 30 mm Al PCB ($R_{\theta JA}$ = 20 °C/W)

(3) Mounted on 30 mm x 30 mm x 2 copper pad areas FR4 PCB ($R_{\theta JA}$ = 30 °C/W)

(4) Mounted on 25 mm x 25 mm x 2 copper pad areas FR4 PCB ($R_{\theta JA}$ = 30 °C/W)

(5) Free air, mounted on recommended copper pad area ($R_{\theta JA}$ = 100 °C/W)

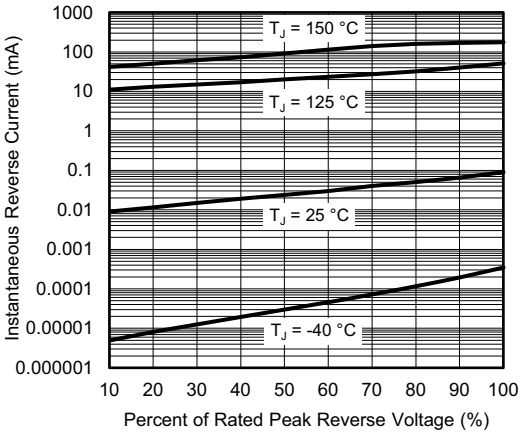


Fig. 4 - Typical Reverse Leakage Characteristics

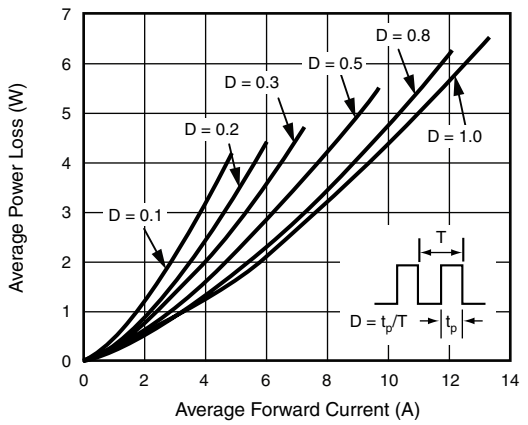


Fig. 2 - Forward Power Loss Characteristics

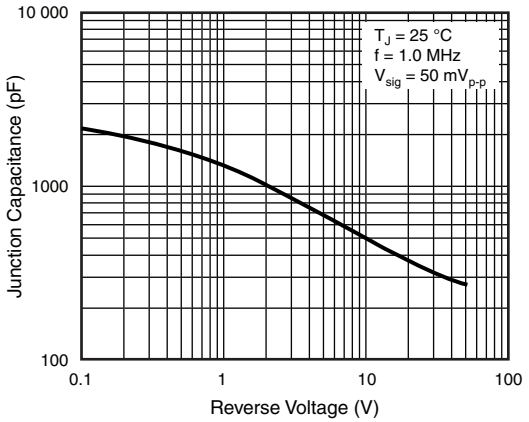
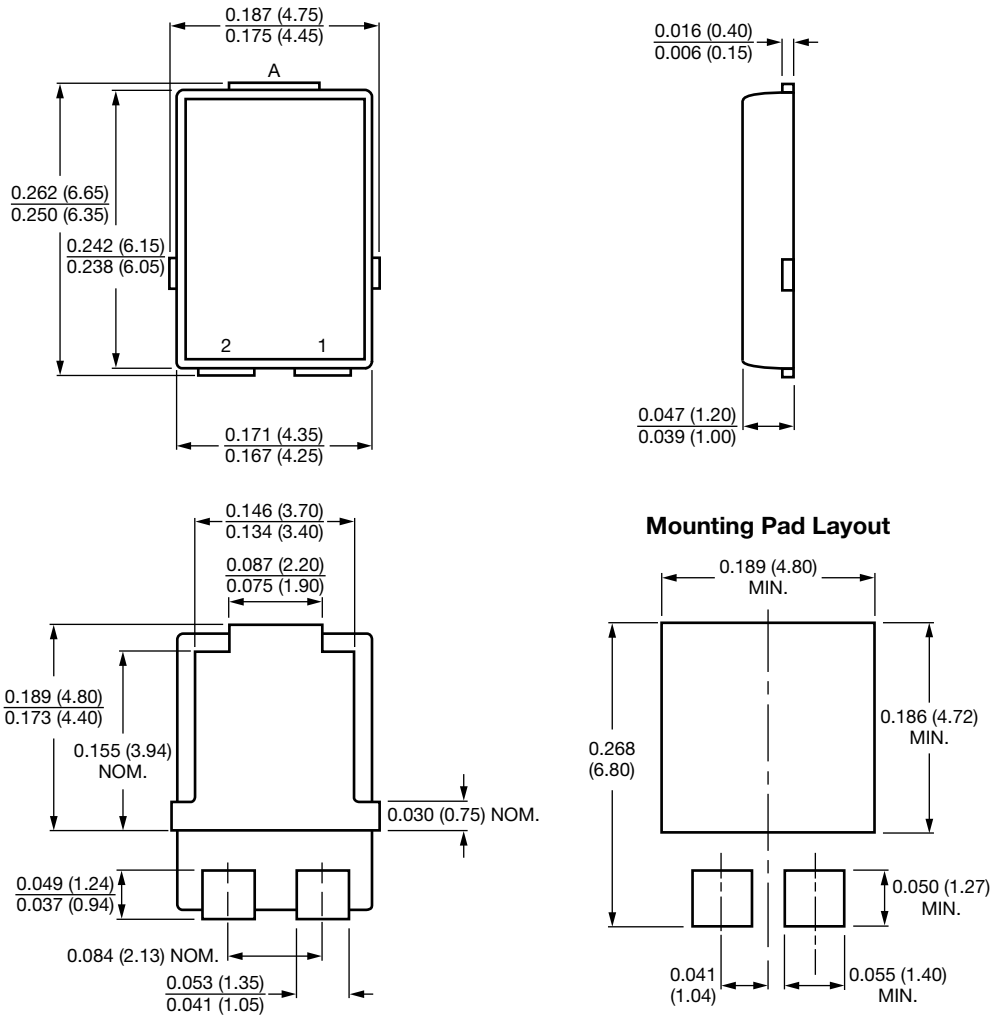


Fig. 5 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

SMPC (TO-277A)



Conform to JEDEC® TO-277A

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