



ELECTRICAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Maximum instantaneous forward voltage	$I_F = 2\text{ A}$	$T_J = 25\text{ }^\circ\text{C}$	$V_F^{(1)}$	0.90	0.98	V
		$T_J = 125\text{ }^\circ\text{C}$		0.75	0.82	
Maximum reverse current at rated $V_R$		$T_J = 25\text{ }^\circ\text{C}$	$I_R^{(2)}$	0.2	1.0	$\mu\text{A}$
		$T_J = 125\text{ }^\circ\text{C}$		12.6	25	
Maximum reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1\text{ A}, I_{rr} = 0.25\text{ A}$		$t_{rr}$	-	25	ns
Typical reverse recovery time	$I_F = 1.0\text{ A}, V_R = 30\text{ V},$ $dI/dt = 50\text{ A}/\mu\text{s}, I_{rr} = 10\% I_{RM}$	$T_J = 25\text{ }^\circ\text{C}$	$t_{rr}$	25	-	ns
		$T_J = 100\text{ }^\circ\text{C}$		35	-	
Typical stored charge	$I_F = 1.0\text{ A}, V_R = 30\text{ V},$ $dI/dt = 50\text{ A}/\mu\text{s}, I_{rr} = 10\% I_{RM}$	$T_J = 25\text{ }^\circ\text{C}$	$Q_{rr}$	10	-	nC
		$T_J = 100\text{ }^\circ\text{C}$		15	-	
Typical junction capacitance	4.0 V, 1 MHz		$C_J$	25	-	pF

**Notes**(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle(2) Pulse test: Pulse width  $\leq 40\text{ ms}$ 

THERMAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	ESH2PB	ESH2PC	ESH2PD	UNIT
Typical thermal resistance	$R_{\theta JA}^{(1)}$	80			$^\circ\text{C}/\text{W}$
	$R_{\theta JL}^{(1)}$	15			
	$R_{\theta JC}^{(1)}$	22			

**Note**(1) Thermal resistance from junction to ambient and junction to lead mounted on PCB with 6.0 mm x 6.0 mm copper pad areas.  $R_{\theta JL}$  is measured at the terminal of cathode band.  $R_{\theta JC}$  is measured at the top center of the body

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
ESH2PB-M3/84A	0.024	84A	3000	7" diameter plastic tape and reel
ESH2PB-M3/85A	0.024	85A	10 000	13" diameter plastic tape and reel
ESH2PBHM3/84A <sup>(1)</sup>	0.024	84A	3000	7" diameter plastic tape and reel
ESH2PBHM3/85A <sup>(1)</sup>	0.024	85A	10 000	13" diameter plastic tape and reel

**Note**

(1) Automotive grade



RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)

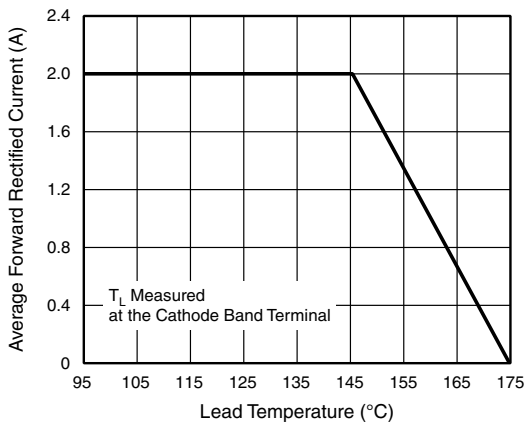


Fig. 1 - Maximum Forward Current Derating Curve

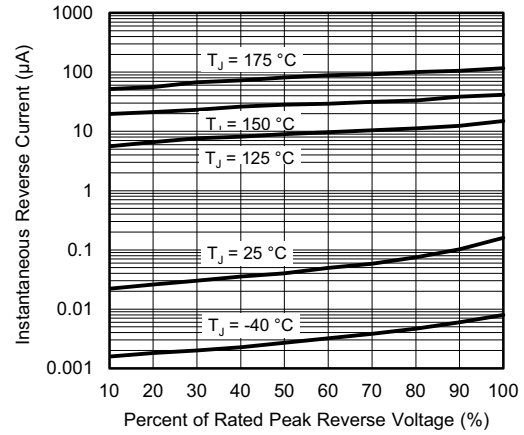


Fig. 4 - Typical Reverse Leakage Characteristics

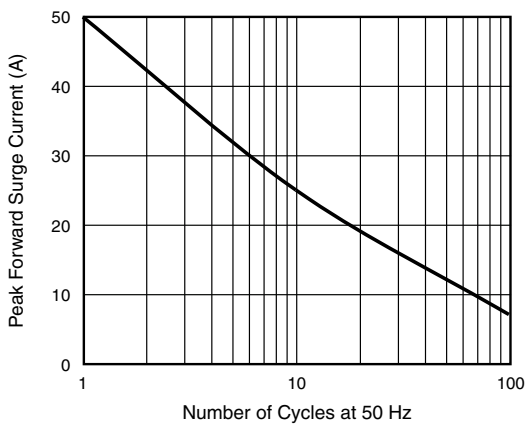


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

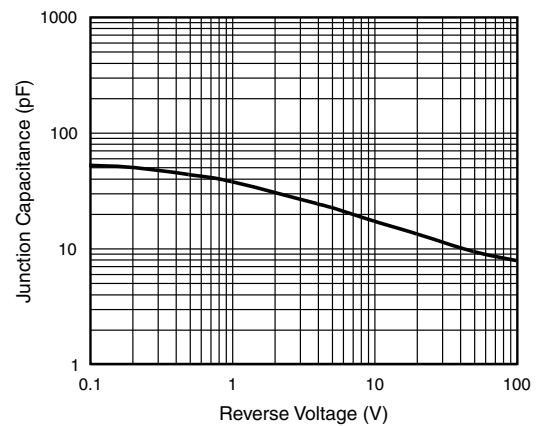


Fig. 5 - Typical Junction Capacitance

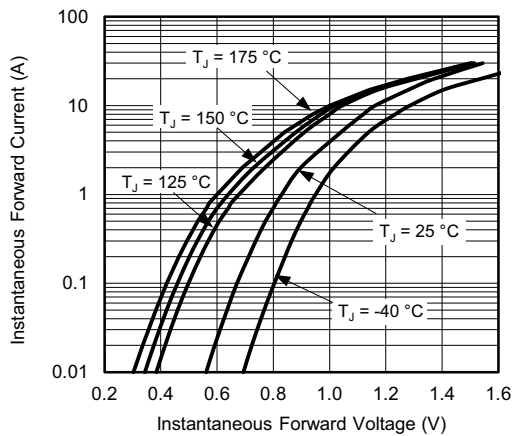
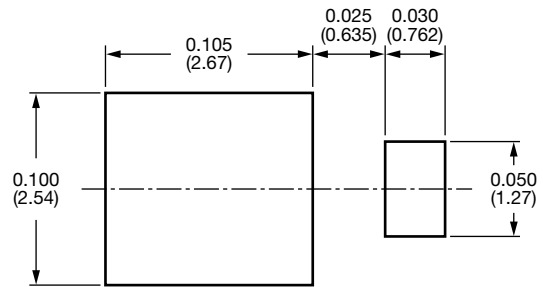
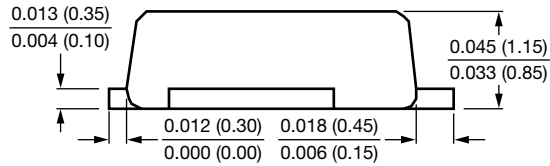
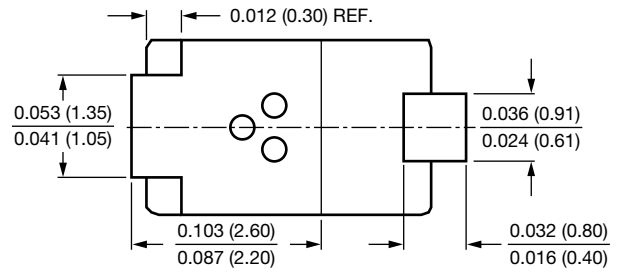
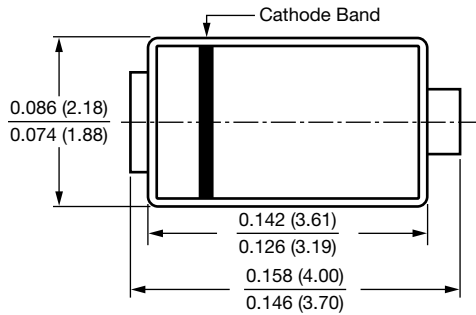


Fig. 3 - Typical Instantaneous Forward Characteristics



### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

#### SMP (DO-220AA)





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