

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)				
PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Maximum reverse recovery time	at $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$	t_{rr}	25	ns
Typical reverse recovery time	at $I_F = 1.0\text{ A}$, $V_R = 30\text{ V}$ di/dt = 50 A/ μs , $I_{rr} = 10\%$ I_{RM} $T_J = 25\text{ }^{\circ}\text{C}$	t_{rr}	25	ns
	at $I_F = 1.0\text{ A}$, $V_R = 30\text{ V}$ di/dt = 50 A/ μs , $I_{rr} = 10\%$ I_{RM} $T_J = 100\text{ }^{\circ}\text{C}$		35	
Typical reverse recovery time	at $I_F = 1.0\text{ A}$, $V_R = 30\text{ V}$ di/dt = 50 A/ μs , $I_{rr} = 10\%$ I_{RM} $T_J = 25\text{ }^{\circ}\text{C}$	Q_{rr}	10	nC
	at $I_F = 1.0\text{ A}$, $V_R = 30\text{ V}$ di/dt = 50 A/ μs , $I_{rr} = 10\%$ I_{RM} $T_J = 100\text{ }^{\circ}\text{C}$		15	
Typical junction capacitance	at 4.0 V, 1 MHz	C_J	25	pF

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

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	ESH1PB	ESH1PC	ESH1PD	UNIT
Typical thermal resistance ⁽¹⁾	R _{θJA}	105			°C/W
	R _{θJL}	15			
	R _{θJC}	20			

Note:(1) Thermal resistance from junction to ambient and junction to lead mounted on P.C.B. with 5.0 x 5.0 mm copper pad areas. $R_{\theta JL}$ is measured at the terminal of cathode band. $R_{\theta JC}$ is measured at the top centre of the body

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
ESH1PB-E3/84A	0.024	84A	3000	7" Diameter Plastic Tape & Reel
ESH1PB-E3/85A	0.024	85A	10000	13" Diameter Plastic Tape & Reel
ESH1PBHE3/84A ⁽¹⁾	0.024	84A	3000	7" Diameter Plastic Tape & Reel
ESH1PBHE3/85A ⁽¹⁾	0.024	85A	10000	13" Diameter Plastic Tape & Reel

Note:

(1) Automotive grade AEC Q101 qualified

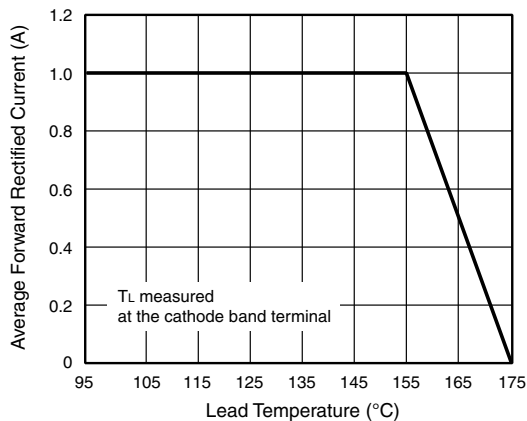
RATINGS AND CHARACTERISTICS CURVES($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Figure 1. Forward Current Derating Curve

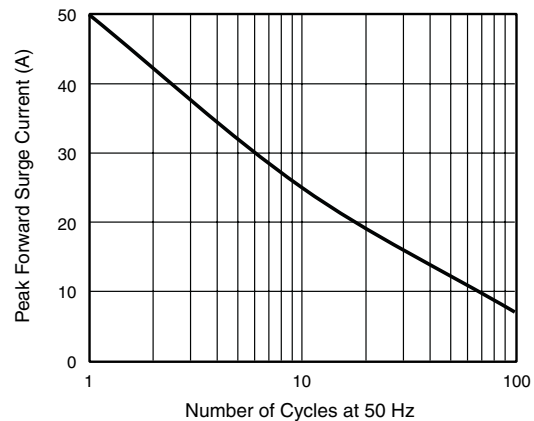


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

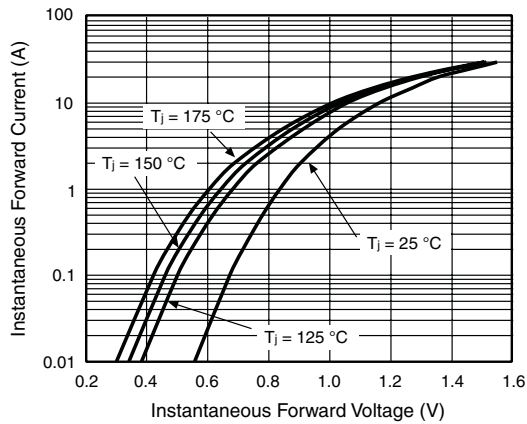


Figure 3. Typical Instantaneous Forward Characteristics

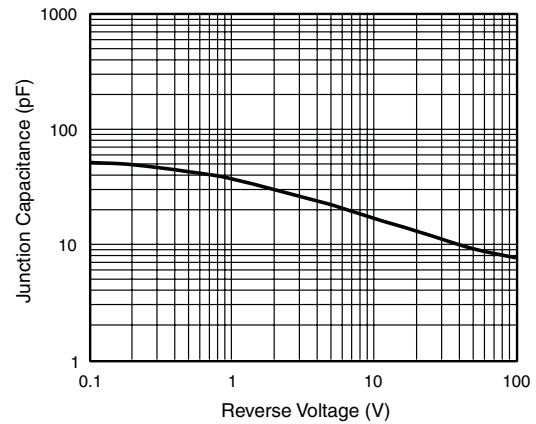


Figure 5. Typical Junction Capacitance

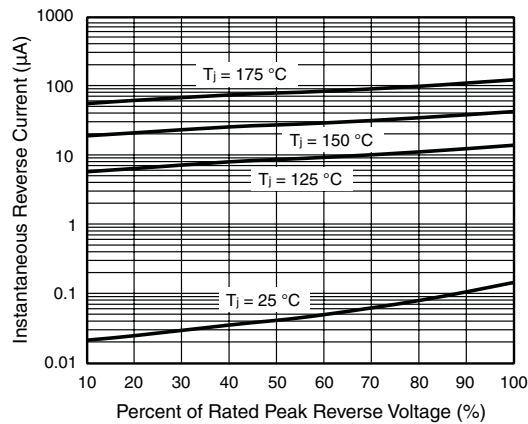


Figure 4. Typical Reverse Leakage Characteristics

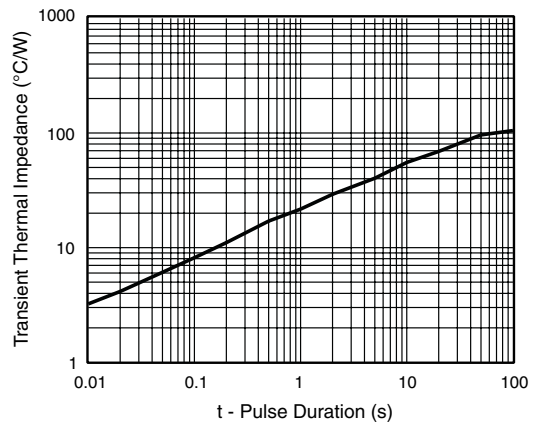


Figure 6. Typical Transient Thermal impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)**DO-220AA (SMP)**