ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)				
PARAMETER	**TEST CONDITIONS**	**SYMBOL**	**VALUE**	**UNIT**
Maximum reverse recovery time	at I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A	t_{rr}	25	ns
Typical reverse recovery time	at I_F = 1.0 A, V_R = 30 V di/dt = 50 A/µs, I_{rr} = 10 % I_{RM} T_j = 25 °C at I_F = 1.0 A, V_R = 30 V di/dt = 50 A/µs, I_{rr} = 10 % I_{RM} T_j = 100 °C	t_{rr}	25 35	ns
Typical reverse recovery time	at I_F = 1.0 A, V_R = 30 V di/dt = 50 A/µs, I_{rr} = 10 % I_{RM} T_j = 25 °C at I_F = 1.0 A, V_R = 30 V di/dt = 50 A/µs, I_{rr} = 10 % I_{RM} T_j = 100 °C	Q_{rr}	10 15	nC
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)	$R_{\theta JA}$ $R_{\theta JL}$ $R_{\theta JC}$	105 15 20			°C/W

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 °C unless otherwise noted)

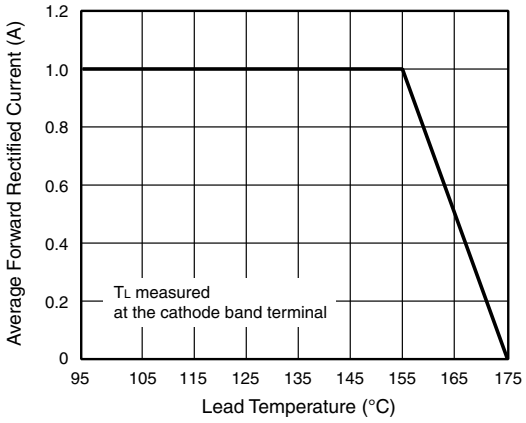

Figure 1. Forward Current Derating Curve

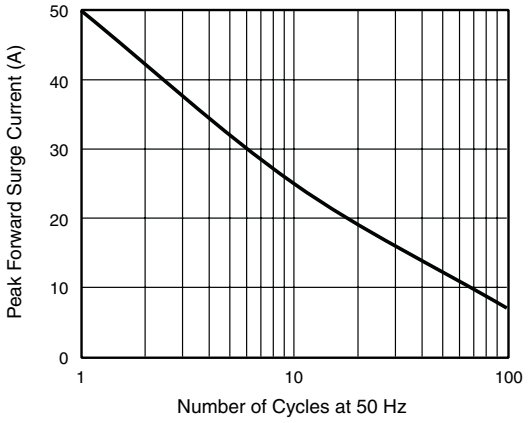

Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

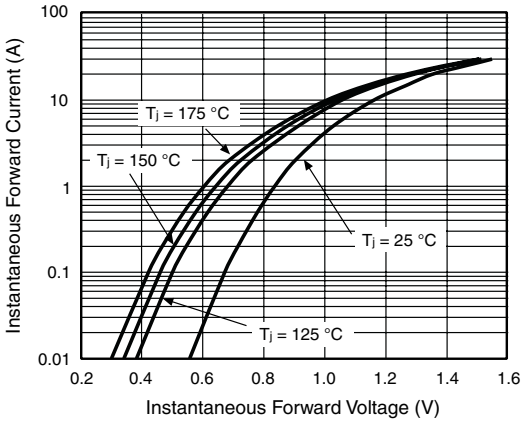

Figure 3. Typical Instantaneous Forward Characteristics

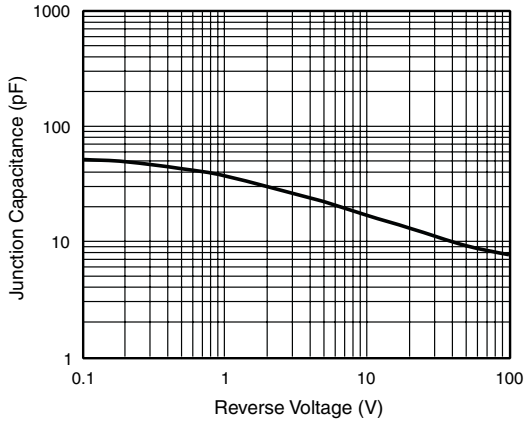

Figure 5. Typical Junction Capacitance

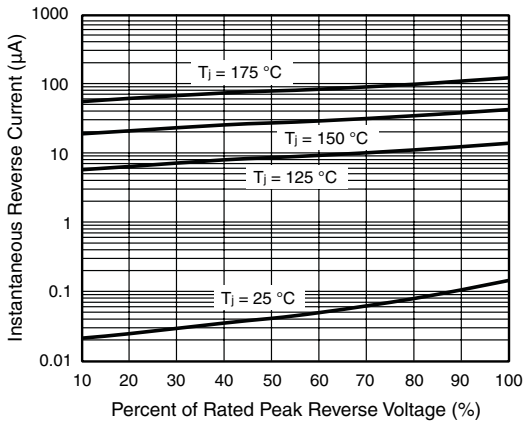

Figure 4. Typical Reverse Leakage Characteristics

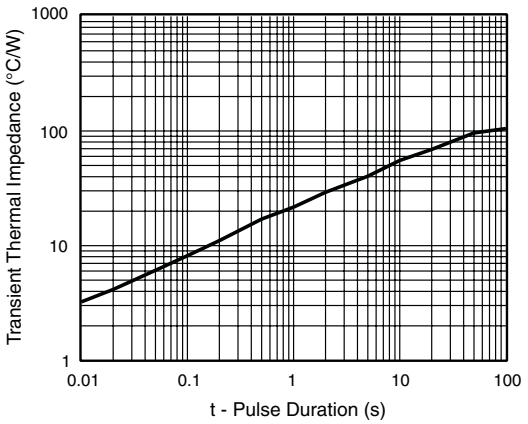

Figure 6. Typical Transient Thermal impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-220AA (SMP)