| **ELECTRICAL CHARACTERISTICS** ($T_A$ = 25 °C unless otherwise noted) | | | | | |
|---|---|---|---|---|---|
| **PARAMETER** | **TEST CONDITIONS** | | **SYMBOL** | **VALUE** | **UNIT** |
| Maximum instantaneous forward voltage | $I_F$ = 0.7 A | | $V_F$ (1) | 0.87 | V |
| | $I_F$ = 1 A | | $V_F$ | 0.90 | |
| Maximum DC reverse current at rated DC blocking voltage | | $T_A$ = 25 °C | $I_R$ | 1.0 | μA |
| | | $T_A$ = 125 °C | | 25 | |
| Maximum reverse current | $V_R$ = 20 V, $T_J$ = 150 °C | | $I_R$ | 50 | μA |
| Maximum reverse recovery time | $I_F$ = 0.5 A, $I_R$ = 1 A, $I_{rr}$ = 0.25 A | | $t_{rr}$ | 25 | ns |
| Typical reverse recovery time | $I_F$ = 0.6 A, $V_R$ = 30 V, dI/dt = 50 A/μs, $I_{rr}$ = 10 % $I_{RM}$ | $T_J$ = 25 °C | $t_{rr}$ | 25 | ns |
| | | $T_J$ = 100 °C | | 35 | |
| Typical stored charge | $I_F$ = 0.6 A, $V_R$ = 30 V, dI/dt = 50 A/μs, $I_{rr}$ = 10 % $I_{RM}$ | $T_J$ = 25 °C | $Q_{rr}$ | 10 | nC |
| | | $T_J$ = 100 °C | | 15 | |
| Typical junction capacitance | 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** | **ESH1B** | **ESH1C** | **ESH1D** | **UNIT** |
| Typical thermal resistance | $R_{\theta JA}$ (1) | 85 | | | °C/W |
| | $R_{\theta JL}$ (1) | 30 | | | |

**Note**

(1) Units mounted on PCB with 5.0 mm x 5.0 mm (0.013 mm thick) land areas

| **ORDERING INFORMATION** (Example) | | | | |
|---|---|---|---|---|
| **PREFERRED P/N** | **UNIT WEIGHT (g)** | **PREFERRED PACKAGE CODE** | **BASE QUANTITY** | **DELIVERY MODE** |
| ESH1D-E3/61T | 0.064 | 61T | 1800 | 7" diameter plastic tape and reel |
| ESH1D-E3/5AT | 0.064 | 5AT | 7500 | 13" diameter plastic tape and reel |
| ESH1DHE3_A/H (1) | 0.064 | H | 1800 | 7" diameter plastic tape and reel |
| ESH1DHE3_A/I (1) | 0.064 | I | 7500 | 13" diameter plastic tape and reel |
| ESH1D-M3/61T | 0.064 | 61T | 1800 | 7" diameter plastic tape and reel |
| ESH1D-M3/5AT | 0.064 | 5AT | 7500 | 13" diameter plastic tape and reel |
| ESH1DHM3_A/H (1) | 0.064 | H | 1800 | 7" diameter plastic tape and reel |
| ESH1DHM3_A/I (1) | 0.064 | I | 7500 | 13" diameter plastic tape and reel |

**Note**

(1) AEC-Q101 qualified

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

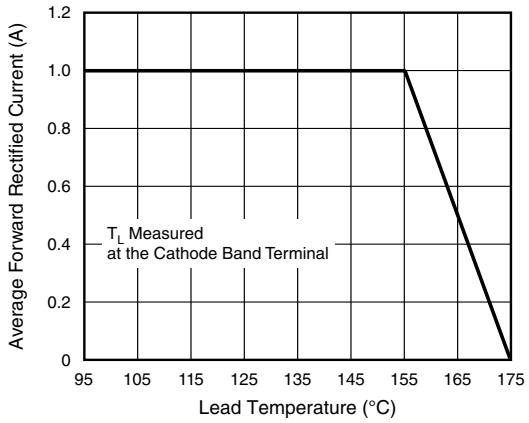



Fig. 1 - Maximum Forward Current Derating Curve

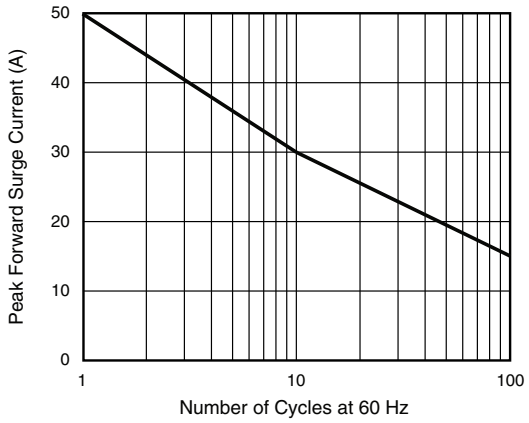



Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

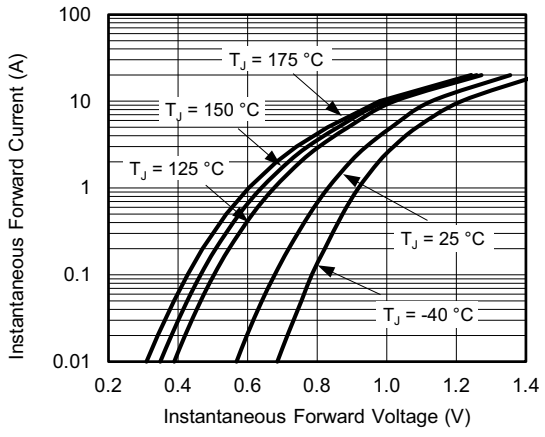



Fig. 3 - Typical Reverse Leakage Characteristics

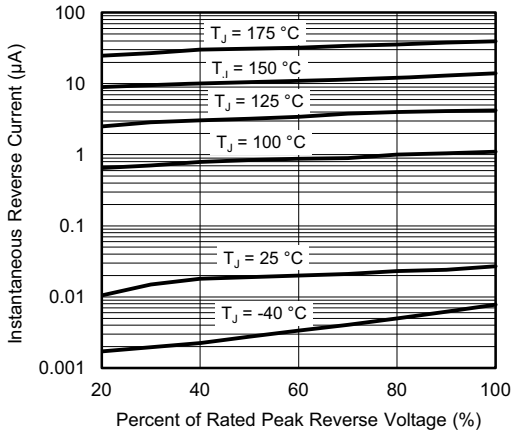



Fig. 4 - Typical Instantaneous Forward Characteristics

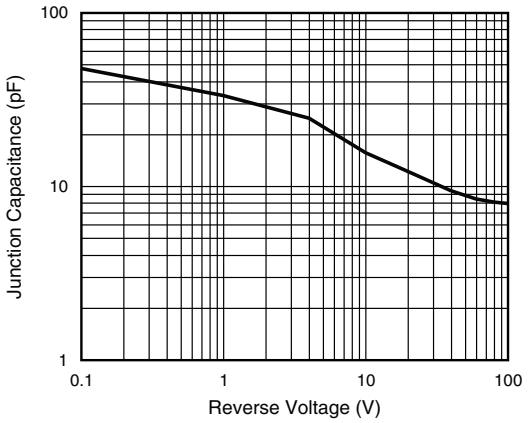



Fig. 5 - Typical Junction Capacitance

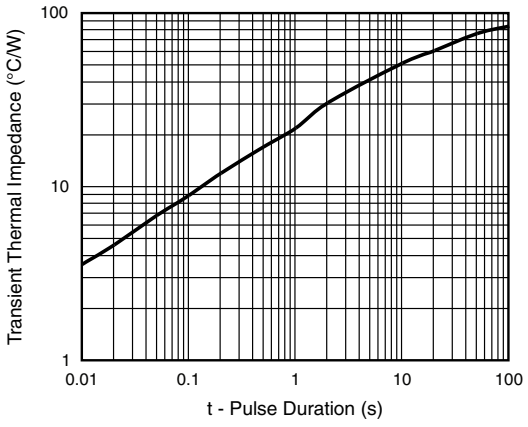
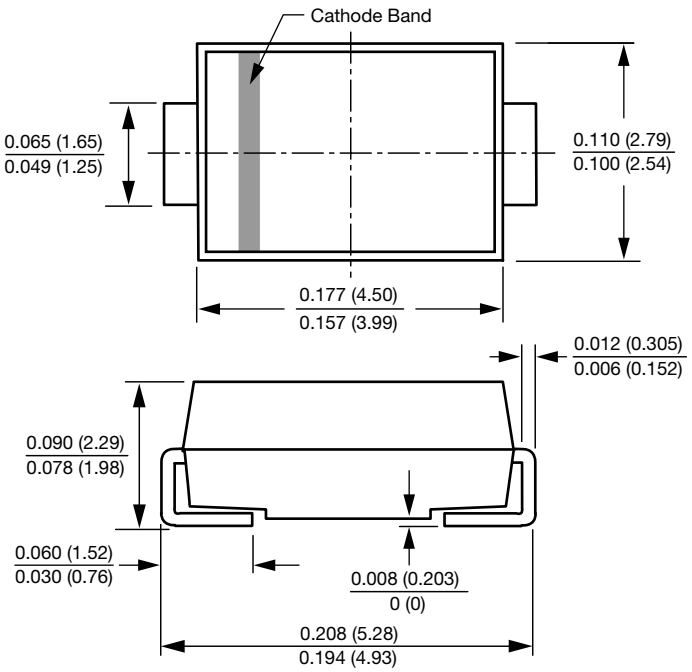


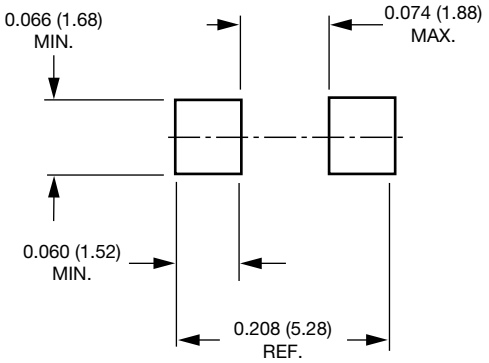

Fig. 6 - Typical Transient Thermal Impedance

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

**SMA (DO-214AC)**




**Mounting Pad Layout**



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