

Features

- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)
- For Surface Mount Applications
- High Current Capability
- Extremely Low Thermal Resistance
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 10°C/W Junction to Lead
- Thermal Resistance: 18°C/W Junction to Case
- Thermal Resistance: 50°C/W Junction to Ambient

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| S5AL | S5AL | 50V | 35V | 50V |
| S5BL | S5BL | 100V | 70V | 100V |
| S5DL | S5DL | 200V | 140V | 200V |
| S5GL | S5GL | 400V | 280V | 400V |
| S5JL | S5JL | 600V | 420V | 600V |
| S5KL | S5KL | 800V | 560V | 800V |
| S5ML | S5ML | 1000V | 700V | 1000V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

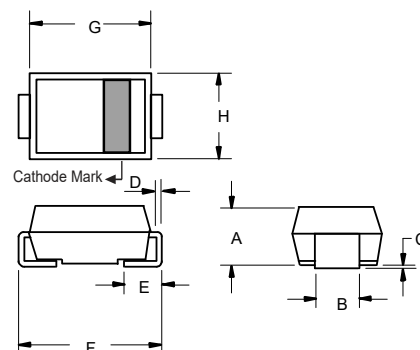
| | | | |
|---|-------------|--------------------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 5.0A | $T_L=75^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 100A | 8.3ms, Half Sine |
| Maximum Instantaneous Forward Voltage | V_F | 1.15V | $I_{FM}=5.0A$; $T_J=25^\circ\text{C}^*$ |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 5 μA 250 μA | $T_J=25^\circ\text{C}$; $T_J=125^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 40pF | Measured at 1.0MHz, $V_R=4.0V$ |

*Pulse Test: Pulse Width 200 μsec , Duty Cycle 2%

Note: 1. High Temperature Solder Exemptions Applied, See EU Directive Annex Notes 7a

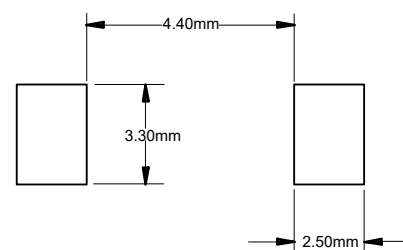
5 Amp Silicon Rectifier 50 to 1000 Volts

SMC (DO-214AB)



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.079 | 0.103 | 2.00 | 2.62 | |
| B | 0.108 | 0.128 | 2.75 | 3.25 | |
| C | 0.002 | 0.008 | 0.051 | 0.203 | |
| D | 0.006 | 0.012 | 0.152 | 0.305 | |
| E | 0.030 | 0.060 | 0.76 | 1.52 | |
| F | 0.305 | 0.320 | 7.75 | 8.13 | |
| G | 0.260 | 0.280 | 6.60 | 7.11 | |
| H | 0.220 | 0.245 | 5.59 | 6.22 | |

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

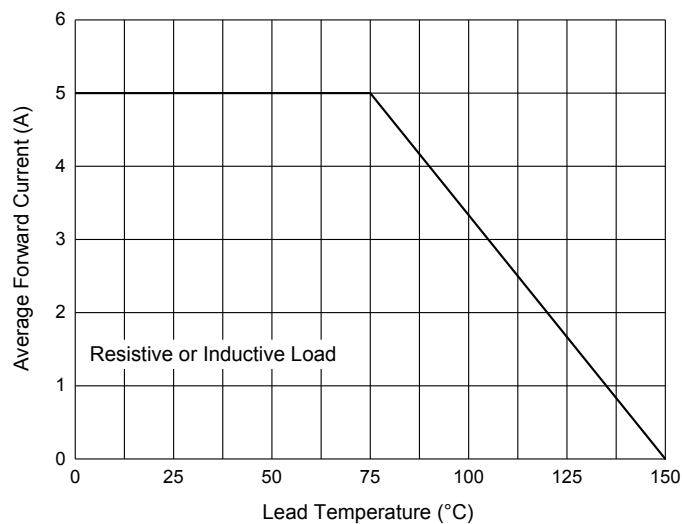


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

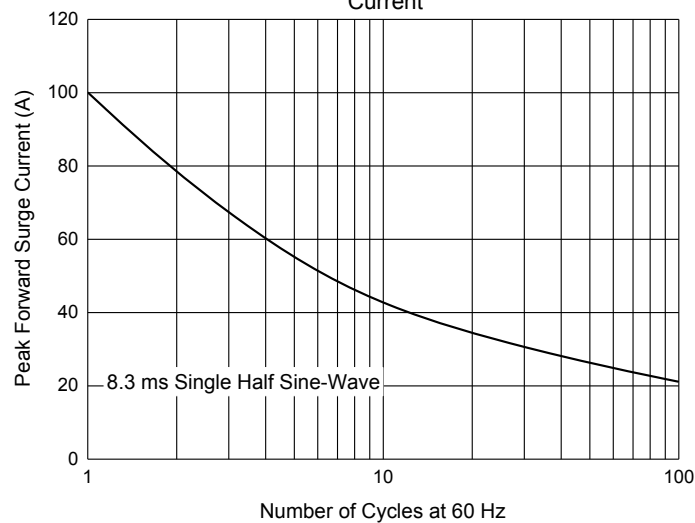


Fig. 3 - Typical Instantaneous Forward Characteristics

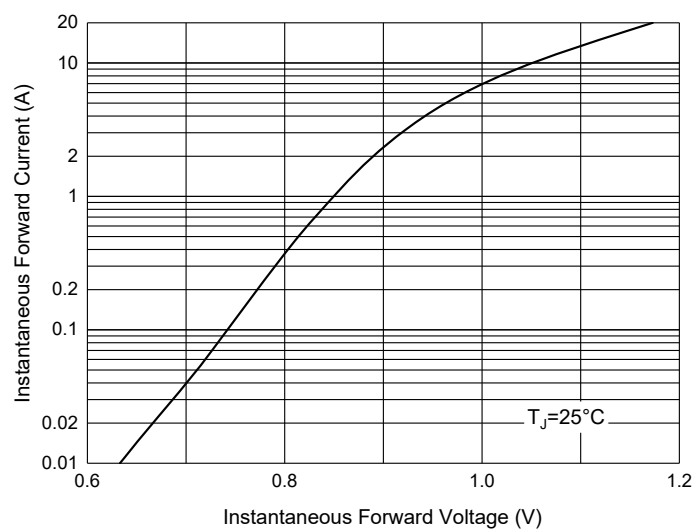
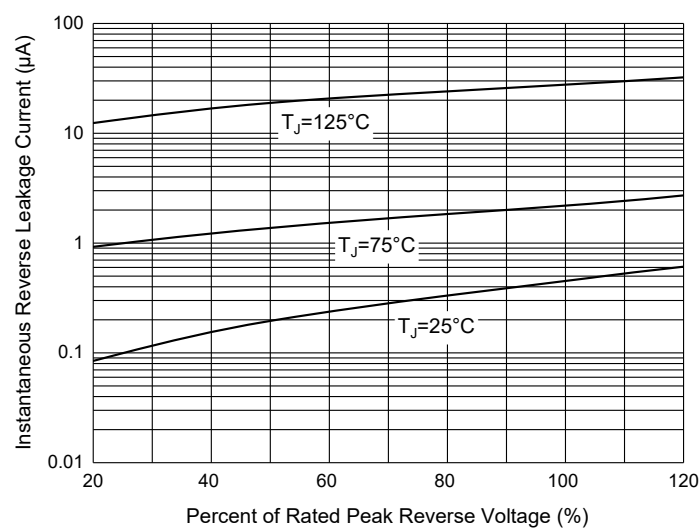


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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