

Features

- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)
- High Current Capability
- For Surface Mount Application

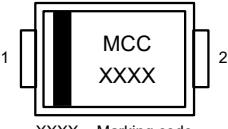

Maximum Ratings @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Value | | | | | | | Unit |
|--|-------------|--------|--------|--------|--------|--------|--------|---------|----------------------|
| | | SK 52L | SK 53L | SK 54L | SK 55L | SK 56L | SK 58L | SK 510L | |
| Peak Repetitive Reverse Voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Working Peak Reverse Voltage | V_{RWM} | | | | | | | | |
| DC Blocking Voltage | V_R | | | | | | | | |
| RMS Reverse Voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | V |
| Average Rectified Forward Current @ $T_L=90^\circ\text{C}$ | $I_{F(AV)}$ | 5 | | | | | | | A |
| Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave | I_{FSM} | 100 | | | | | | | A |
| I^2t Rating for Fusing @ $1\text{ms} \leq t \leq 8.3\text{ms}$ | I^2t | 41.5 | | | | | | | A^2s |

Marking code

| Part Number | Marking Code |
|-------------|--------------|
| SK52L | SK52 |
| SK53L | SK53 |
| SK54L | SK54 |
| SK55L | SK55 |
| SK56L | SK56 |
| SK58L | SK58 |
| SK510L | SK510 |

Internal Structure

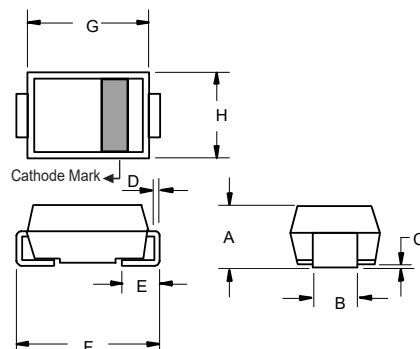
| Pin | Description | Simplified outline | Graphic symbol |
|-----|-------------|--|---|
| 1 | Cathode |  XXXX = Marking code |  |
| 2 | Anode | | |

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

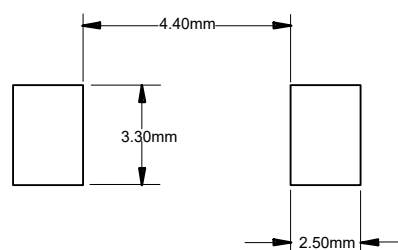
5 Amp Schottky Rectifier 20 to 100 Volts

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



Thermal characteristics

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---------------|---|------------|-----|-----|-----|------|
| T_J | Operating Junction Temperature Range | | -55 | | 150 | °C |
| T_{stg} | Storage Temperature Range | | -55 | | 150 | °C |
| $R_{th(J-L)}$ | Thermal Resistance from Junction to Lead | Note 1 | | 16 | | °C/W |
| $R_{th(J-A)}$ | Thermal Resistance from Junction to Ambient | Note 1 | | 65 | | °C/W |

Note:

1. Mounted on P.C.B. with 16mm*16mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|----------------------|--------|-----------------------------------|-----|-----|------|------|
| Forward Voltage | V_F | | | | | |
| SK52L~SK54L | | $I_F=5A; T_J=25^{\circ}C$ | | | 0.55 | V |
| SK55L~SK56L | | $I_F=5A; T_J=25^{\circ}C$ | | | 0.75 | |
| SK58L~SK510L | | $I_F=5A; T_J=25^{\circ}C$ | | | 0.85 | |
| Reverse Current | I_R | | | | | |
| SK52L~SK56L | | at Rated $V_R; T_J=25^{\circ}C$ | | | 0.1 | mA |
| | | at Rated $V_R; T_J=125^{\circ}C$ | | | 50 | |
| SK58L~SK510L | | at Rated $V_R; T_J=25^{\circ}C$ | | | 0.01 | |
| | | at Rated $V_R; T_J=125^{\circ}C$ | | | 10 | |
| Junction Capacitance | C_J | | | | | |
| SK52L~SK54L | | $V_R=4V; f=1MHz; T_J=25^{\circ}C$ | | 275 | | pF |
| SK55L~SK56L | | | | 195 | | |
| SK58L~SK510L | | | | 135 | | |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

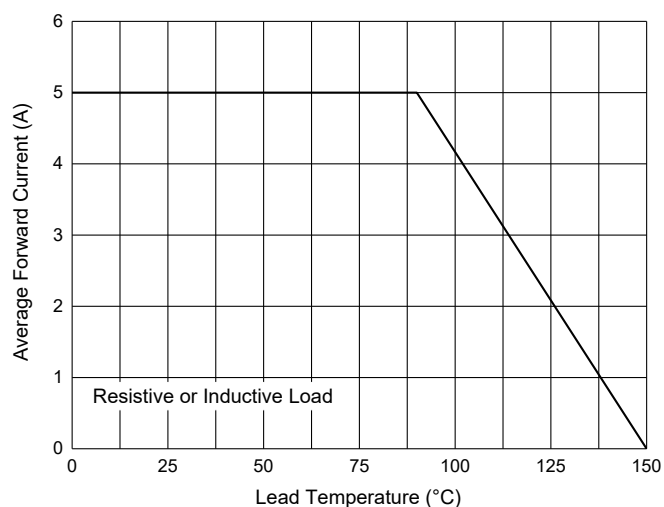


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

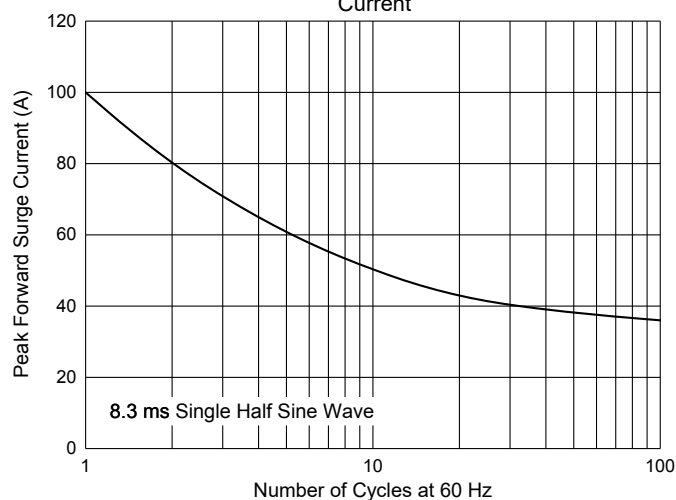


Fig. 3 - Typical Forward Characteristics

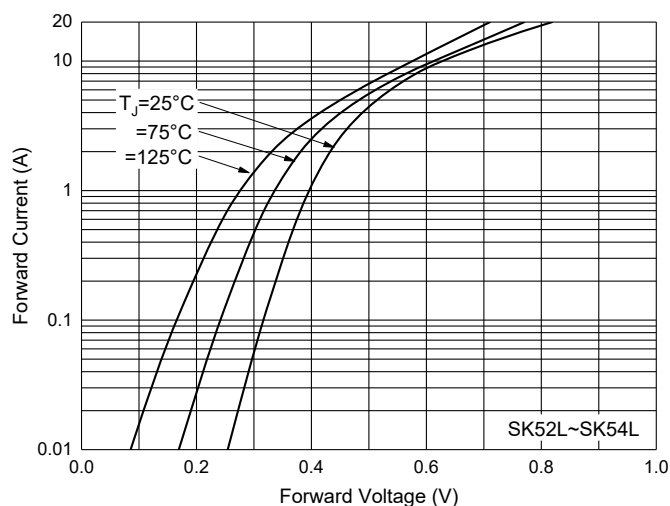


Fig. 4 - Typical Reverse Leakage Characteristics

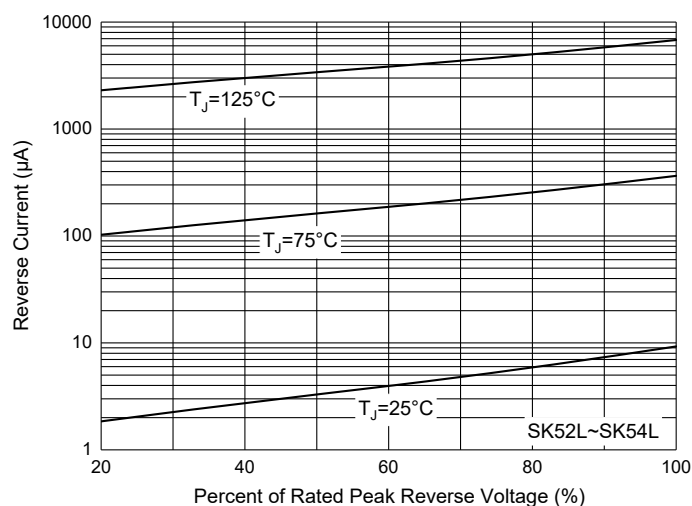


Fig. 5 - Typical Forward Characteristics

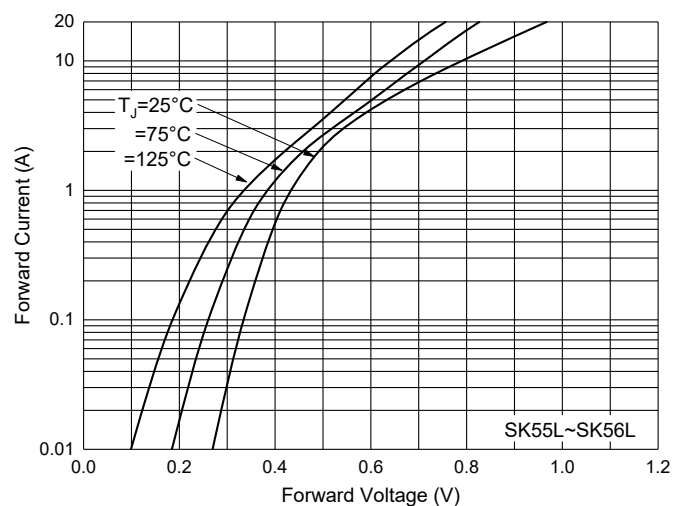
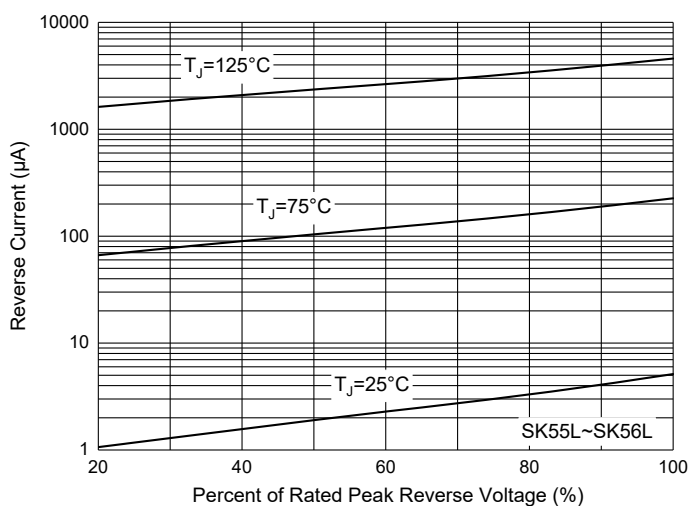


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Forward Characteristics

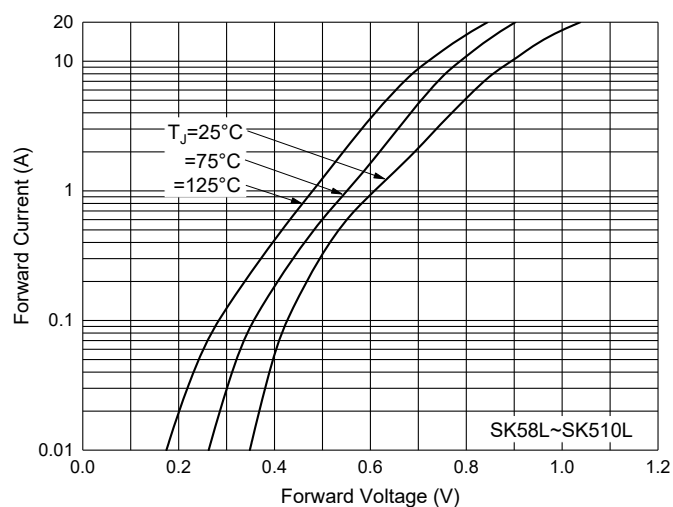


Fig. 8 - Typical Reverse Leakage Characteristics

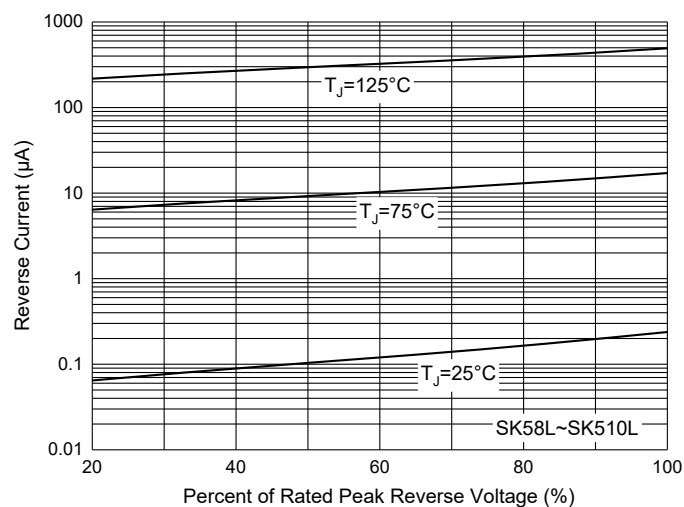
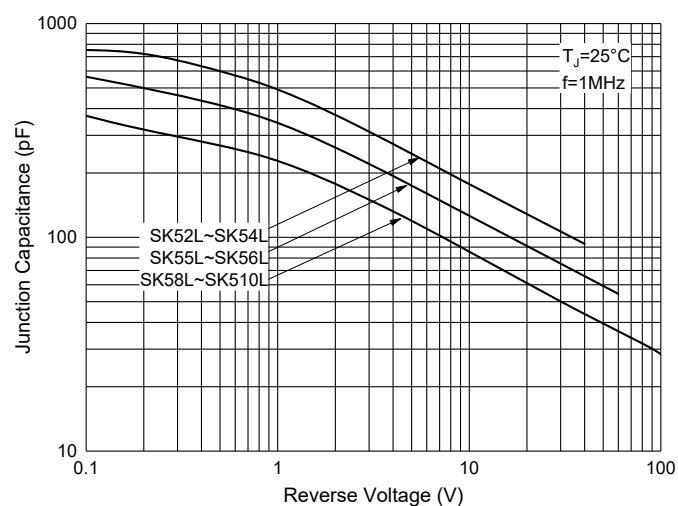


Fig. 9 - Typical Capacitance Characteristics



Ordering Information

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

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