

Features

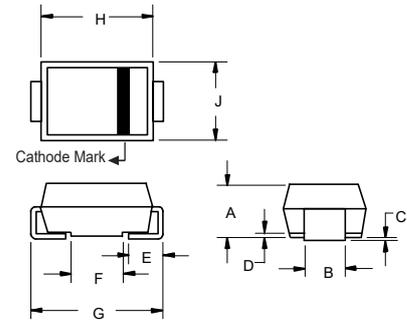
- Halogen Free. "Green" Device (Note 1)
- Guard Ring Protection
- High Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Value | | | | | | | | | | Unit |
|--|-------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|---|------------------|
| | | SS 12-L | SS 13-L | SS 14-L | SS 15-L | SS 16-L | SS 18-L | SS 110-L | SS 1150-L | SS 1200-L | | |
| Peak Repetitive Reverse Voltage | V_{RRM} | | | | | | | | | | | V |
| Working Peak Reverse Voltage | V_{RWM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | | |
| DC Blocking Voltage | V_R | | | | | | | | | | | |
| RMS Reverse Voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | V | |
| Average Rectified Forward Current | $I_{F(AV)}$ | 1 | | | | | | | | | | A |
| Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave | I_{FSM} | 30 | | | | | | | | | | A |
| Current Squared Time @ 1ms ≤ t ≤ 8.3ms | I^2t | 3.735 | | | | | | | | | | A ² s |

1 Amp
80 to 800 Volts

SMA (DO-214AC)

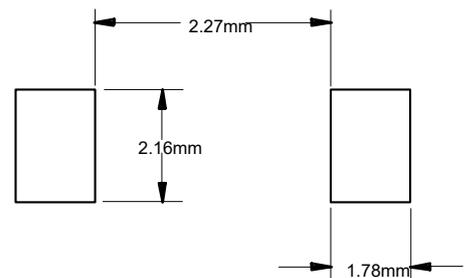


| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.079 | 0.096 | 2.00 | 2.44 | |
| B | 0.050 | 0.064 | 1.27 | 1.63 | |
| C | 0.002 | 0.008 | 0.051 | 0.203 | |
| D | --- | 0.020 | --- | 0.51 | |
| E | 0.030 | 0.060 | 0.76 | 1.52 | |
| F | 0.065 | 0.091 | 1.65 | 2.32 | |
| G | 0.189 | 0.220 | 4.80 | 5.59 | |
| H | 0.157 | 0.187 | 4.00 | 4.75 | |
| J | 0.090 | 0.115 | 2.25 | 2.92 | |

Marking code

| Part Number | Marking Code |
|-------------|--------------|
| SS12-L | SS12 |
| SS13-L | SS13 |
| SS14-L | SS14 |
| SS15-L | SS15 |
| SS16-L | SS16 |
| SS18-L | SS18 |
| SS110-L | SS110 |
| SS1150-L | S1150 |
| SS1200-L | S1200 |

SUGGESTED SOLDER PAD LAYOUT



Internal Structure

| Pin | Description | Simplified Outline | Graphic Symbol |
|-----|-------------|--------------------|----------------|
| 1 | Cathode | | |
| 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.

Thermal characteristics

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---------------|---|-------------------|-----|-----|-----|------|
| T_J | Operating Junction Temperature Range | SS12-L ~ SS14-L | -55 | | 125 | °C |
| T_J | Operating Junction Temperature Range | SS15-L ~ SS1200-L | -55 | | 150 | °C |
| T_{stg} | Storage Temperature Range | | -55 | | 150 | °C |
| $R_{th(J-L)}$ | Thermal Resistance from Junction to Lead | Note 1 | | 22 | | °C/W |
| $R_{th(J-A)}$ | Thermal Resistance from Junction to Ambient | Note 1 | | 80 | | °C/W |

Note:

1. Mounted on P.C.B. with 5mm*5mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|--------|--|-----|----------------------|--------------------------------------|------|
| Forward Voltage SS12-L ~ SS14-L SS15-L ~ SS16-L SS18-L ~ SS110-L SS1150-L SS1200-L | V_F | $I_F=1A; T_J=25^\circ C$ | | | 0.50 0.70 0.85 0.90 0.92 | V |
| Reverse Current SS12-L ~ SS16-L SS18-L ~ SS1200-L | I_R | at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$ at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$ | | | 0.1 20 0.01 5 | mA |
| Junction Capacitance SS12-L ~ SS14-L SS15-L ~ SS16-L SS18-L ~ SS110-L SS1150-L ~ SS1200-L | C_J | $V_R=4V; f=1MHz; T_J=25^\circ C$ | | 50 40 30 20 | | pF |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

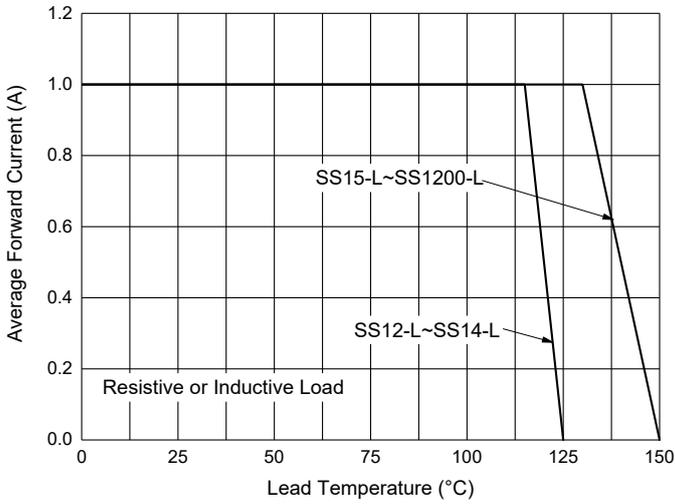


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

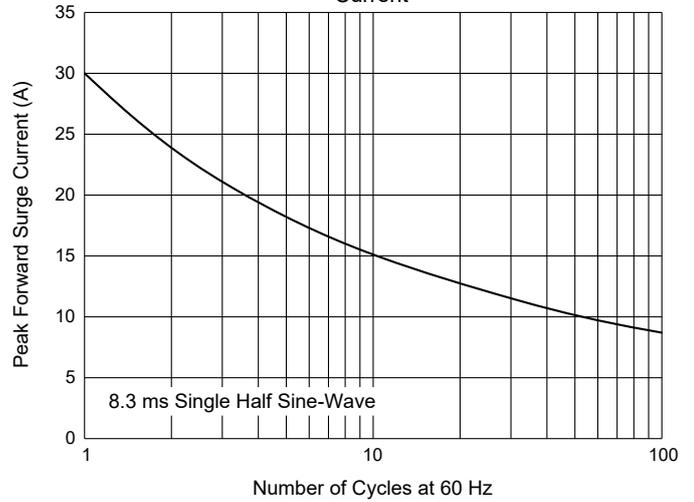


Fig. 3 - Typical Forward Characteristics

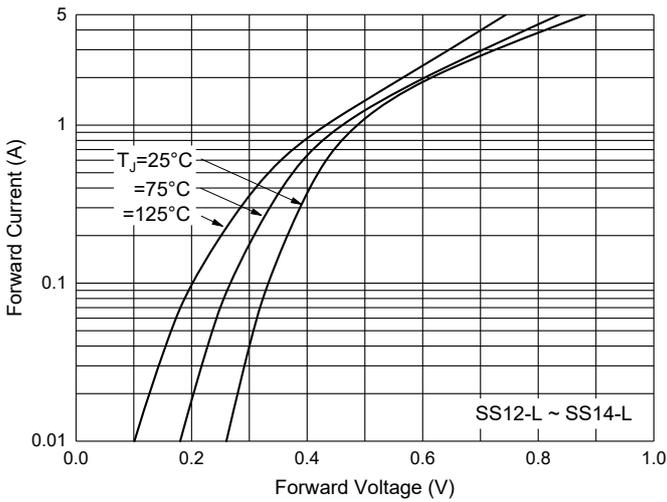


Fig. 4 - Typical Reverse Leakage Characteristics

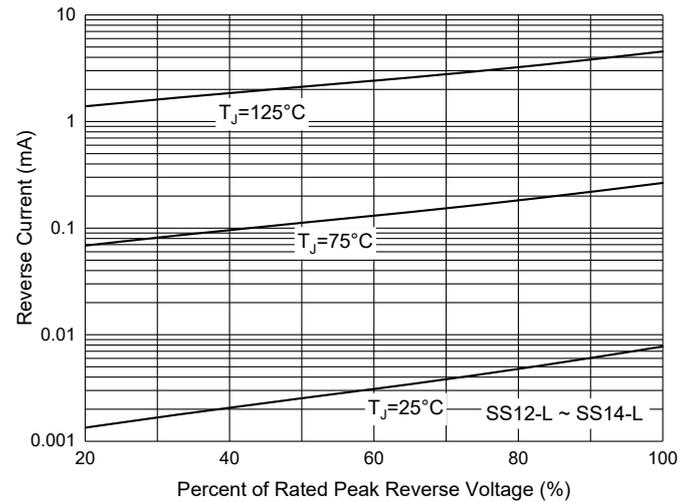


Fig. 5 - Typical Forward Characteristics

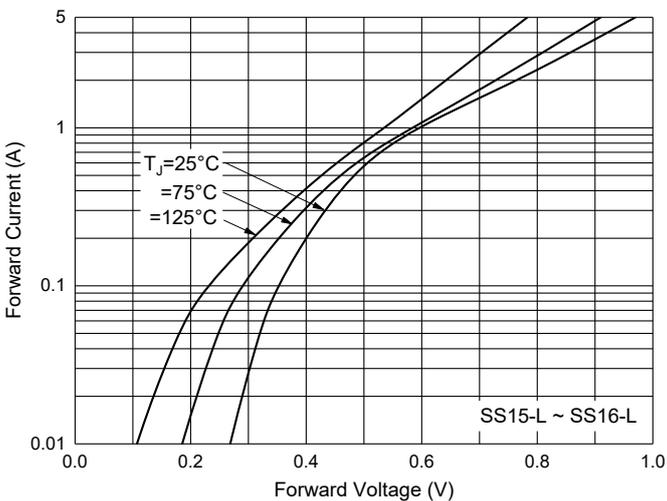
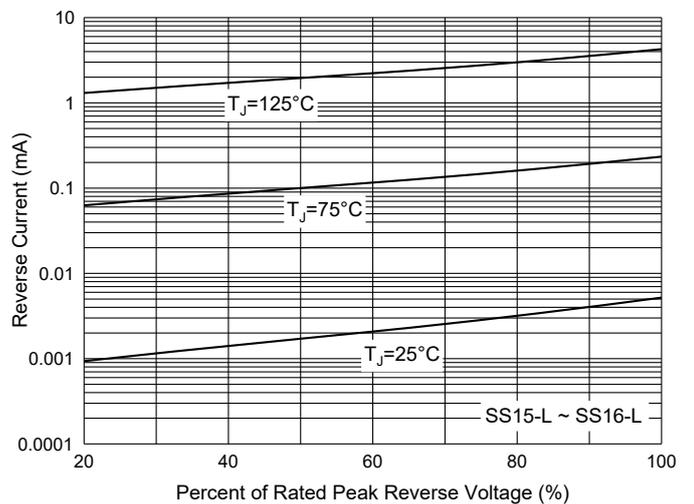


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Forward Characteristics

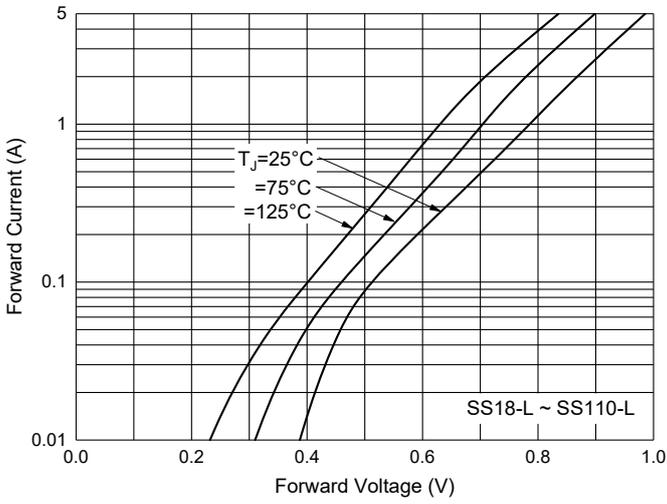


Fig. 8 - Typical Reverse Leakage Characteristics

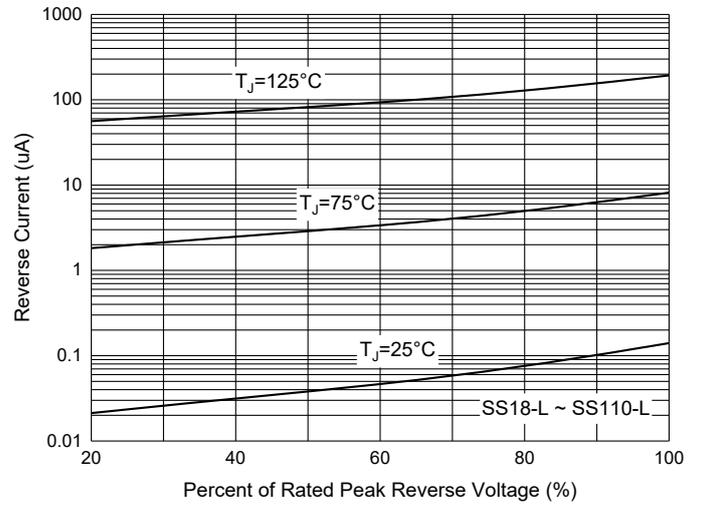


Fig. 9 - Typical Forward Characteristics

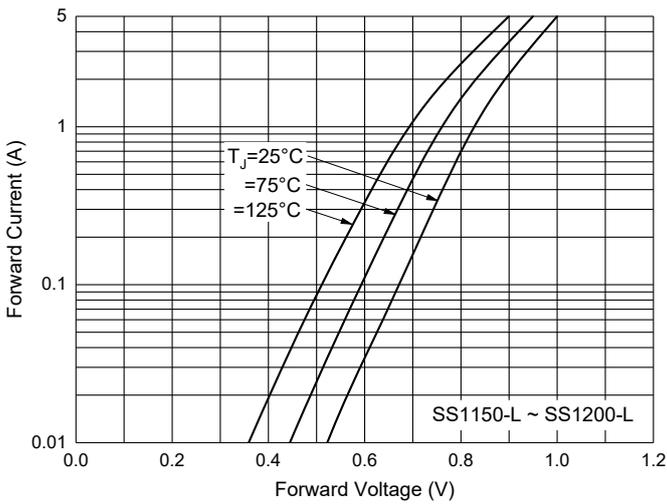


Fig. 10 - Typical Reverse Leakage Characteristics

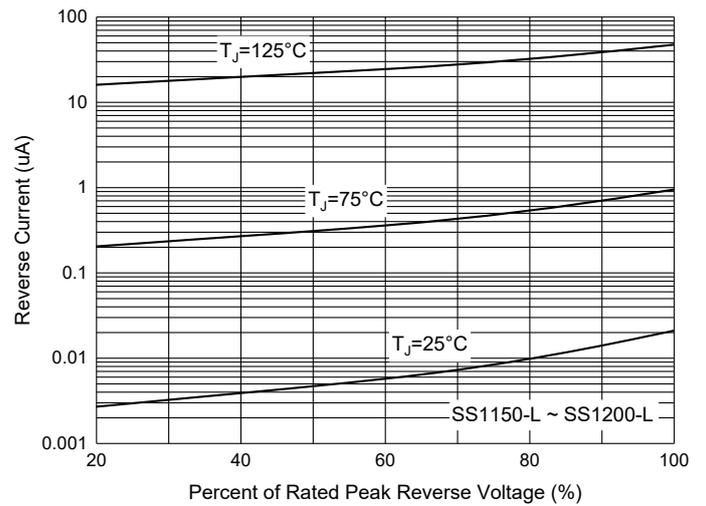


Fig. 11 - Typical Capacitance Characteristics

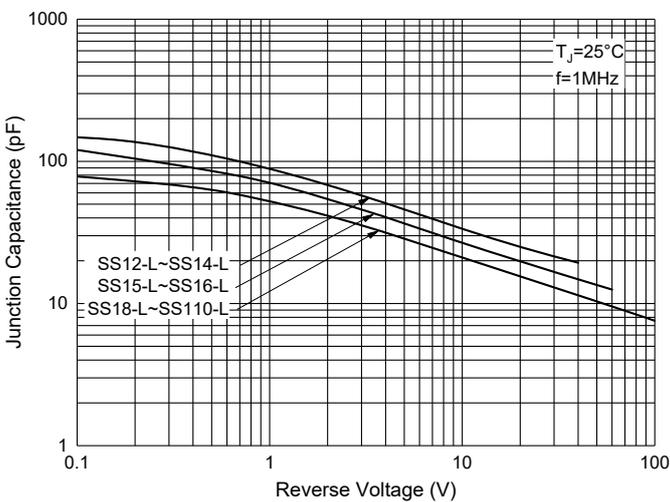
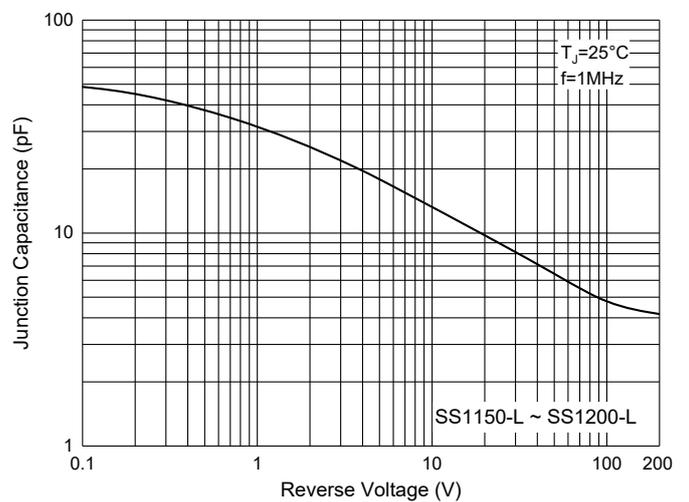


Fig. 12 - Typical Capacitance Characteristics



Ordering Information

| Device | Packing |
|-----------------|----------------------|
| Part Number-LTP | Tape&Reel:5Kpcs/Reel |

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