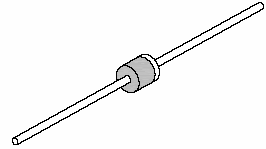


2.5A General Purpose Silicon Rectifier

Features

- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability
- High temperature soldering: 260°C/10 seconds, 0.375" (9.5mm) lead length at 5 lbs (2.3kg) tension
- RoHS Compliance



R-3



Mechanical Data

| | |
|---------------------------|---|
| Case: | R-3 transfer molded plastic |
| Epoxy: | UL94V-0 rate flame retardant |
| Terminals: | Plated axial lead, solderable per MIL-STD-202E, Method 208C |
| Polarity: | Color band denotes cathode end |
| Mounting Position: | Any |
| Weight: | 0.019 ounce, 0.54 gram |

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Symbol | Description | RL251 | RL252 | RL253 | RL254 | RL255 | RL256 | RL257 | Unit | Conditions |
|--------------------------------------|--|-------------|-------|-------|-------|-------|-------|-------|------|---|
| V_{RRM} | Maximum Repetitive Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| V_{RMS} | Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| V_{DC} | Maximum DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| I_{F(AV)} | Maximum Average Forward Rectified Current | 2.5 | | | | | | | A | Note 1 |
| I_{FSM} | Peak Forward Surge Current | 150 | | | | | | | A | 8.3ms single half sine-wave superimposed on rated load (JEDEC method) |
| T_J,T_{STG} | Operating Junction and Storage Temperature Range | -65 to +175 | | | | | | | °C | |

2.5A General Purpose Silicon Rectifier

RL251 - RL257

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Symbol | Description | RL251 | RL252 | RL253 | RL254 | RL255 | RL256 | RL257 | Unit | Conditions |
|-----------------|---|-------|-------|-------|-------|-------|-------|-------|---------------|------------------------|
| V_F | Maximum Forward Voltage | 1.0 | | | | | | | V | $I_F=2.5$ A |
| I_R | Maximum DC Reverse Current at Rated DC Blocking Voltage | 5.0 | | | | | | | μA | $T_A=25^{\circ}C$ |
| | | 50 | | | | | | | | $T_A=100^{\circ}C$ |
| C_J | Typical Junction Capacitance | 35 | | | | | | | pf | $V_R=4V$, $f=1MHz$ |
| $R_{\theta-JA}$ | Maximum Thermal Resistance | 35 | | | | | | | $^{\circ}C/W$ | Note 2 |

- Note:** 1. 60Hz, resistive or inductive load. Derate current by 20% for capacitive load
2. Thermal resistance from junction to ambient at .375" (9.5mm) lead length.

Typical Characteristics Curves

Fig.1- Forward Current Derating Curve

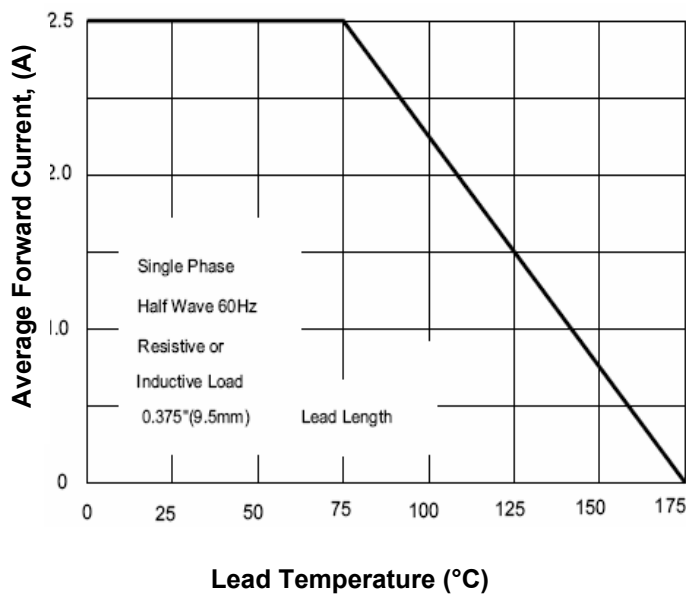
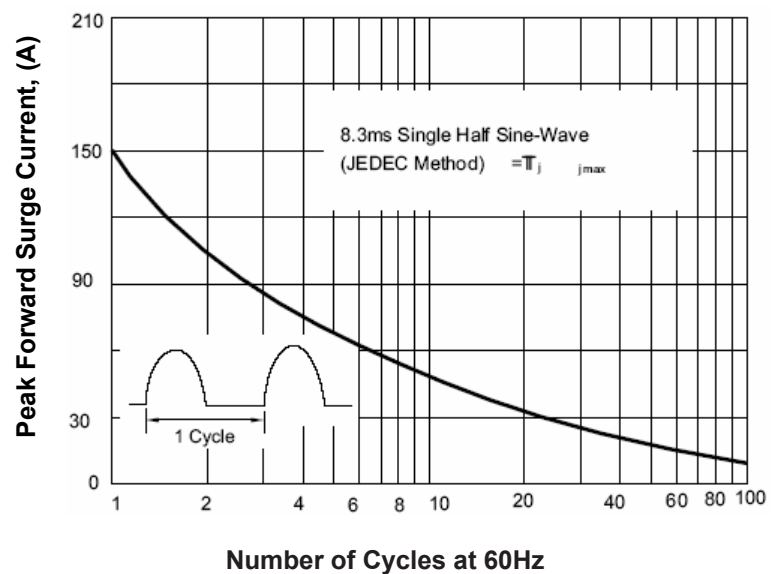


Fig.2- Maximum Non-Repetitive Forward Surge Current



2.5A General Purpose Silicon Rectifier

RL251 - RL257

Fig.3-Typical Forward Characteristics

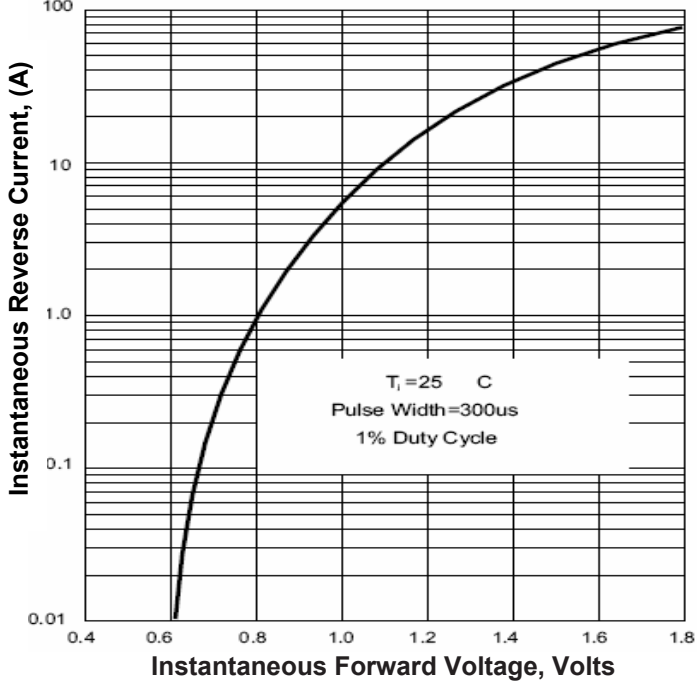


Fig.4- Typical Reverse Characteristics

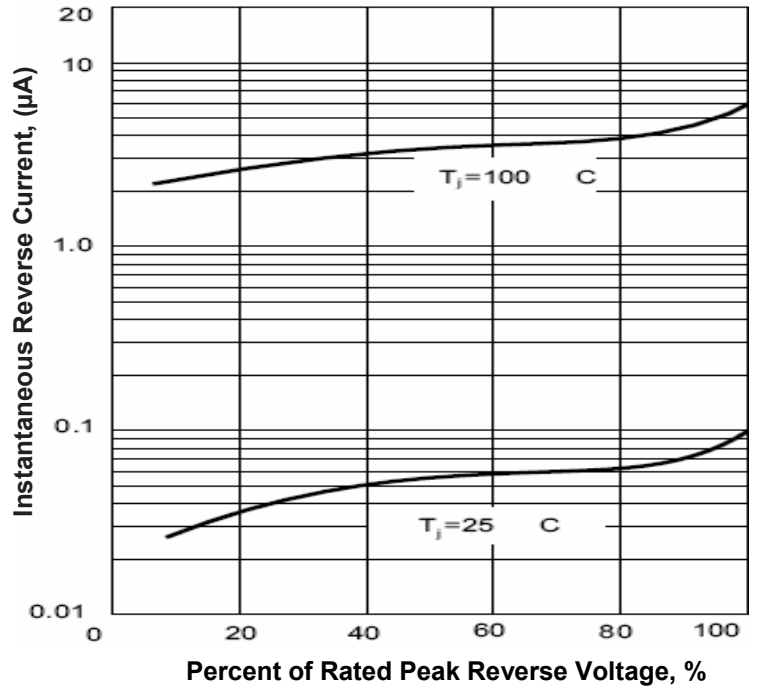
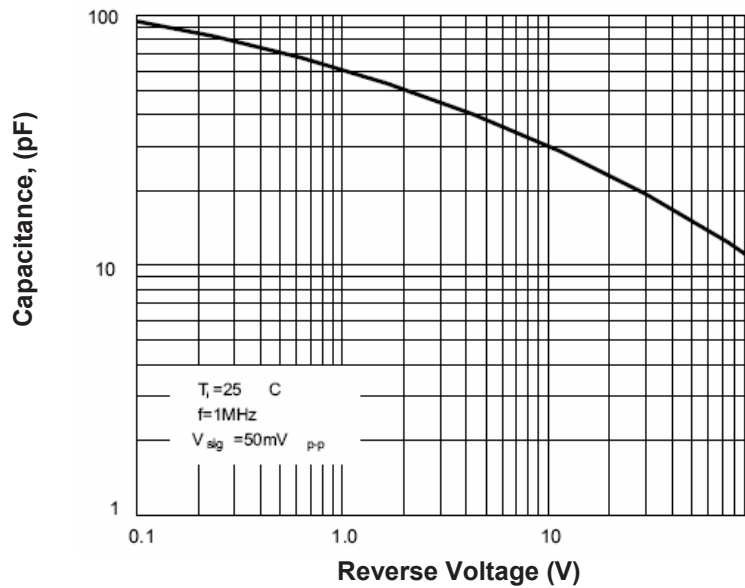


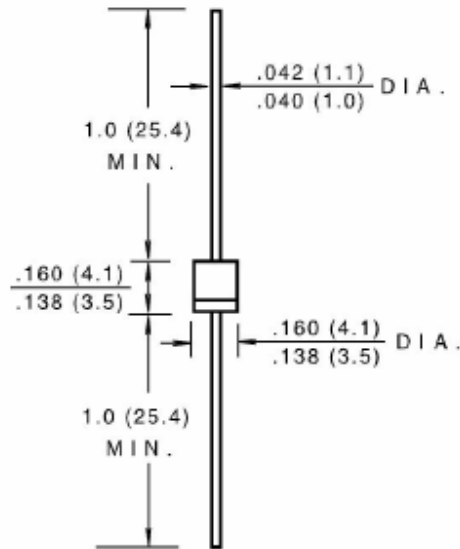
Fig.5-Typical Junction Capacitance



2.5A General Purpose Silicon Rectifier

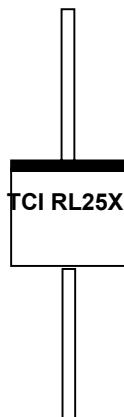
RL251 - RL257

Dimensions in inches (mm)



R-3

Marking Information:

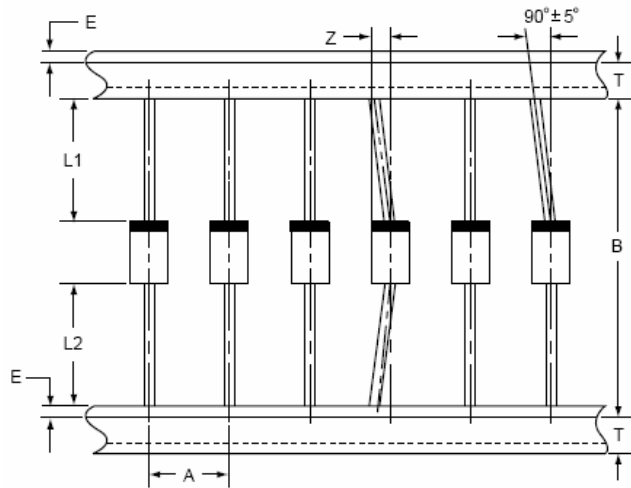


2.5A General Purpose Silicon Rectifier

RL251 - RL257

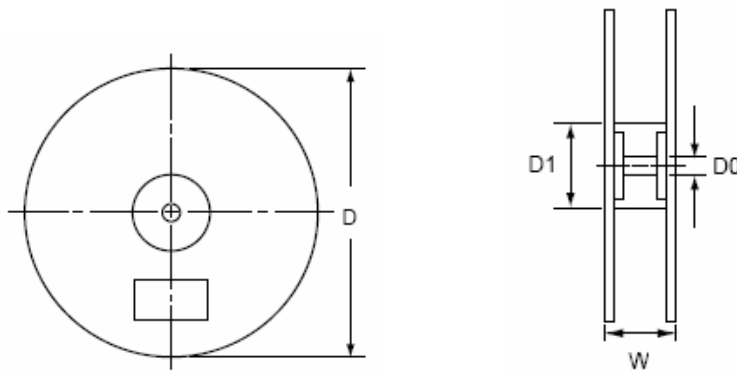
Packing Information:

Carrier Tape Dimensions (in mm)



| Components Outline | A | B | L1- L2 | T | E | Z |
|--------------------|-------|---------------|---------|-------|---------|---------|
| R-3 | 5±0.5 | 52.4+1.5/-0.4 | Max.1.0 | 6±0.4 | Max.0.8 | Max.1.2 |

Reel Dimensions (in mm)



| D | D0 | D1 | W |
|-----------|--------|----------|----------|
| 330.0±2.0 | 30±5.0 | 85.7±5.0 | 79.0±1.0 |

2.5A General Purpose Silicon Rectifier

RL251 - RL257

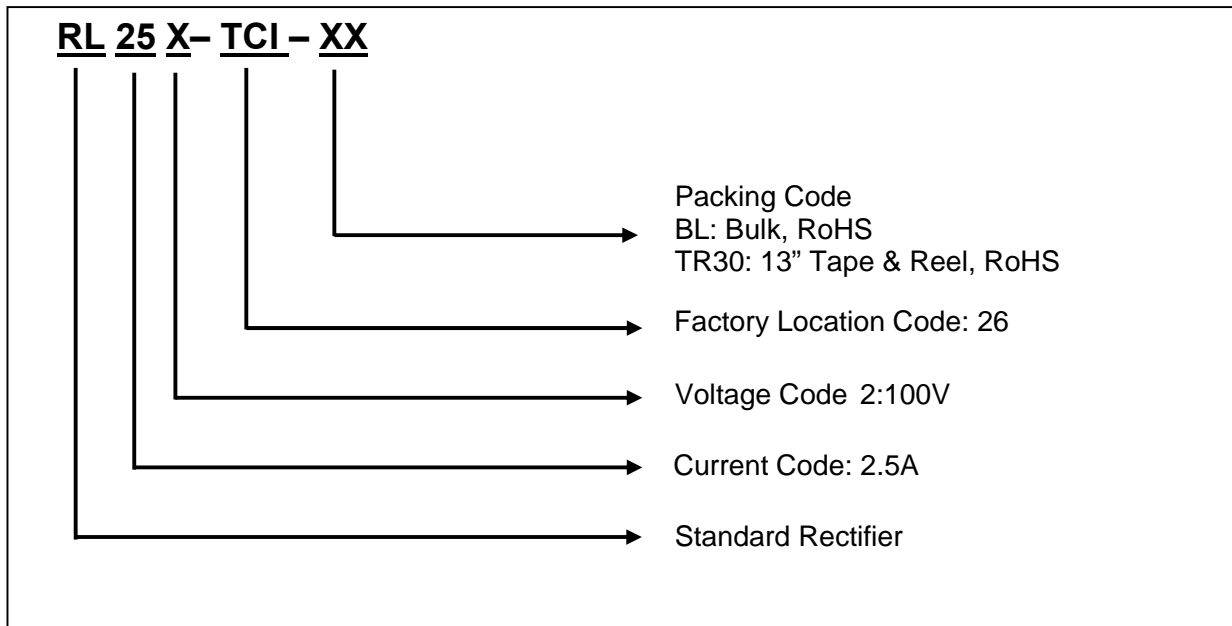
Packing Quantity Information:

| Quantity | PCS per Inner Box | PCS per Carton |
|-------------------|-------------------|----------------|
| -TR30 Tape & Reel | 3000/Reel | 12000 |
| -BL Bulk | 500 | 25000 |

Carton Size Information:

| -2LF Lead Forming | -TR30 Tape & Reel |
|----------------------|----------------------|
| 475X225X260 (in mm) | 360X350X345 (in mm) |

How to Order:



2.5A General Purpose Silicon Rectifier

RL251 - RL257

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