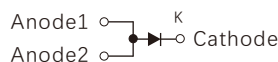
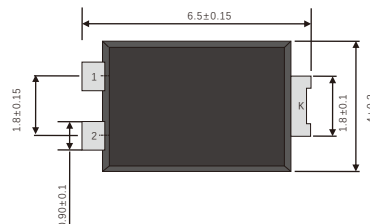
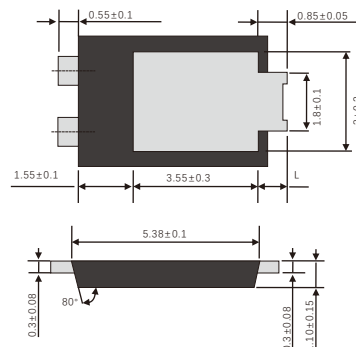


FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- Very low profile-typical height of 1.1mm
- Ideal for automated placement
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



TO-277



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: TO-277 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Mounting Position: Any
- Weight: 0.092 grams(approx)

TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|-------------|-------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 45 | V |
| Maximum average forward rectified current | $I_{F(AV)}$ | 10.0 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL) | I_{FSM} | 150 | A |
| Operating junction temperature range | T_J | -55 to +150 | °C |
| Storage temperature range | T_{stg} | -55 to +150 | °C |

ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

| Parameter | Test Conditions | | Symbol | Typ. | Max. | Unit |
|------------------------------|-----------------------|-----------------------|------------------------------|------|------|------|
| Instaneous forward voltage | T _J =25°C | I _F =10A | V _F ¹⁾ | 0.46 | 0.51 | V |
| | | I _F =5A | | 0.42 | - | |
| | | I _F =2A | | 0.37 | - | |
| | T _J =125°C | I _F =10A | | 0.38 | 0.43 | |
| | | I _F =5A | | 0.32 | - | |
| | | I _F =2A | | 0.26 | - | |
| Recerse current | V _R =45V | T _A =25°C | I _R ²⁾ | 20 | 100 | μA |
| | | T _A =100°C | | 5 | - | mA |
| | | T _A =125°C | | 15 | - | |
| Typical junction capacitance | 4V,1MHz | | C _J | 2100 | | pF |

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width ≤40ms

THERMAL CHARACTERISTICS

| Parameter | Symbol | TO-277 | Unit |
|--|------------------|--------|------|
| Typical thermal resistance ³⁾ | R _{θJA} | 60.0 | °C/W |
| | R _{θJL} | 3.0 | |

3 Units mounted on recommended PCB 1 oz. Pad layout

AVAILABALE PACK INFORMATION

| Product code | Pack | Carton Size L×W×H(mm) | Inner Box Size L×W×H(mm) | Reel diameter (mm) | Inner Box Number | Reel Number Per A Inner Box | Part Number Per A Reel(K) | Quantity(carton) (K) |
|---------------------|------|--------------------------|-----------------------------|-----------------------|---------------------|--------------------------------|------------------------------|-------------------------|
| SP10U45L -TO-277 | Reel | 370×370×360 | 338×338×39 | φ330 | 7 | 2 | 5 | 70 |

FIG.1-FORWARD CURRENT DERATING CURVE

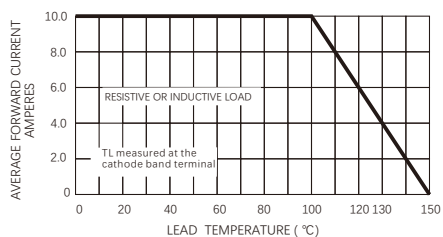


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

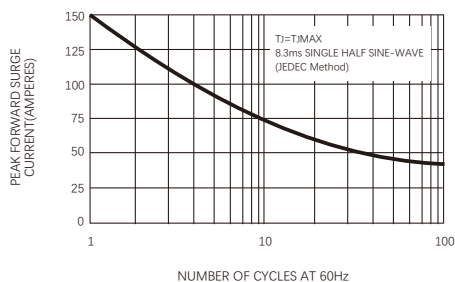


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

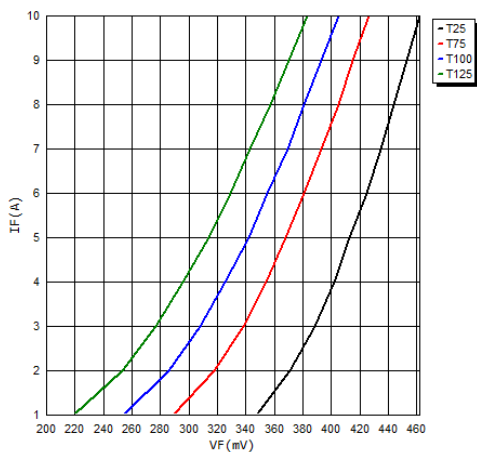


FIG.4-TYPICAL REVERSE CHARACTERISTICS

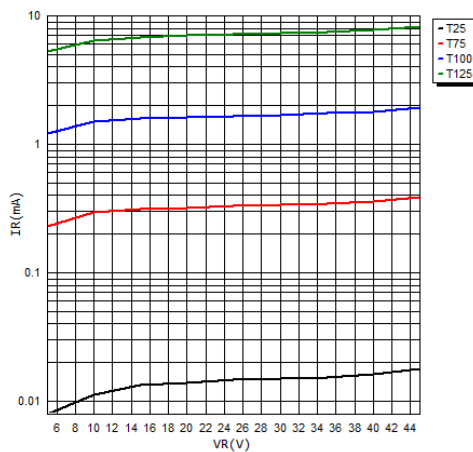
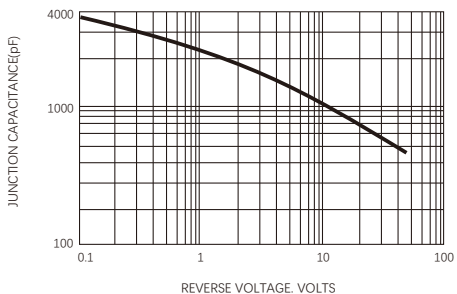


FIG.5-TYPICAL JUNCTION CAPACITANCE



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