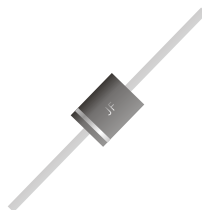
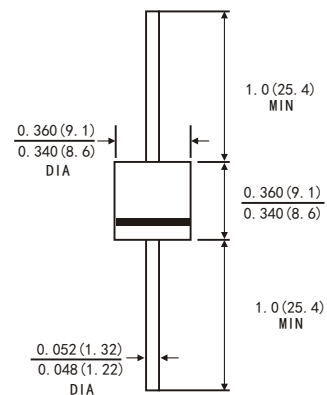


FEATURES

- 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
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



R-6



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: R-6 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 0.07ounce, 2.1 grams

TYPICAL APPLICATIONS

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

| PRIMARY CHARACTERISTICS | |
|-------------------------|-------|
| $I_{F(AV)}$ | 20.0A |
| V_{RRM} | 45V |
| I_{FSM} | 200A |
| V_F at $I_F=20.0A$ | 0.41V |
| T_{JMAX} | 150°C |

MAXIMUM RATINGS

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

| Parameter | Symbol | 20SQ045L | Unit |
|--|-------------|------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 45 | V |
| Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1) | $I_{F(AV)}$ | 20.0 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL) | I_{FSM} | 200 | A |
| Operating junction temperature range | T_J | -55 to+150 | °C |
| Storage temperature range | T_{stg} | -55 to+150 | °C |

RATINGS AND CHARACTERISTIC OF 20SQ045L

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

| Parameter | Test Conditions | | Symbol | TYP. | MAX. | Unit |
|-------------------------------|-----------------------|-----------------------|------------------------------|------|------|------|
| Instantaneous forward voltage | I _F =20.0A | T _A =25°C | V _F ¹⁾ | 0.50 | 0.55 | V |
| | | T _A =100°C | | 0.43 | - | |
| | | T _A =125°C | | 0.41 | - | |
| Reverse current | V _R =45V | T _A =25°C | I _R ²⁾ | 100 | 200 | μA |
| | | T _A =100°C | | 5 | - | mA |
| | | T _A =125°C | | 17 | - | |
| Typical junction capacitance | 4V, 1MHz | | C _j | 2300 | | pF |

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

2.Pulse test: pulse width≤40ms

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

| Parameter | Symbol | 20SQ045L | Unit |
|--|------------------|----------|------|
| Typical thermal resistance ³⁾ | R _{θJA} | 25.0 | °C/W |
| | R _{θJL} | 8.0 | |

3.Thermal resistance from junction to lead vertical P.C.B. mounted , 0.375"(9.5mm)lead length

AVAILABLE PACK INFORMATION

| Product code | Pack | Box Size L*W*H(mm) | Quantity (pcs/box) | Carton SizeL*W*H(mm) | Quantity (box/carton) |
|--------------|------|--------------------|--------------------|----------------------|-----------------------|
| 20SQ045L-R-6 | B/P | 200*80*21 | 100 | 433*203*230 | 50 |
| 20SQ045L-R-6 | T/B | 270*77*105 | 500 | 410*270*325 | 10 |

RATINGS AND CHARACTERISTIC OF 20SQ045L

FIG.1-FORWARD CURRENT DERATING CURVE

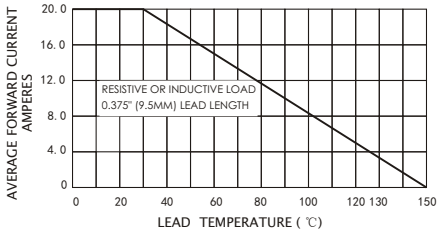


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

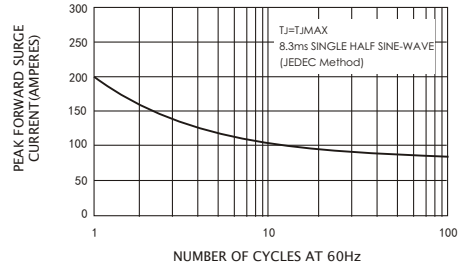


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

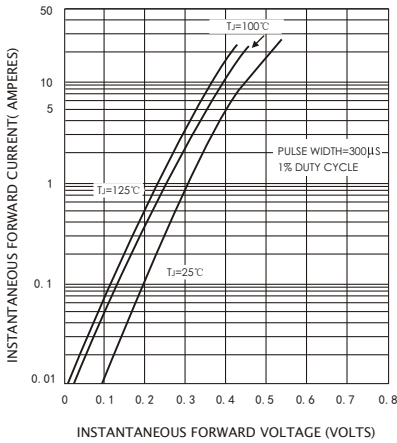


FIG.4-TYPICAL REVERSE CHARACTERISTICS

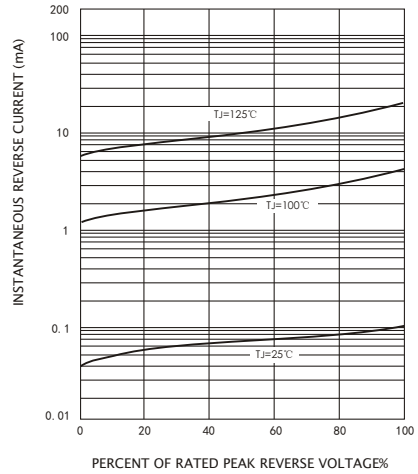


FIG.5-TYPICAL JUNCTION CAPACITANCE

