

FEATURES

- | Open-Junction Chip ,Silastic Passivated
- | Low Reverse Leakage
- | Low Forward Voltage Drop
- | High Forward Surge Current Capability



R-6/P-600



Schematic Symbol

MECHANICAL DATA

- | Case: JEDEC R-6 Molded Plastic
- | Polarity: Color Band Denotes Cathode
- | Mounting Position: Any

APPROVALS

| | |
|-------------|------------------------------------|
| RoHS | Compliance with 2011/65/EU |
| HF | Compliance with IEC61249-2-21:2003 |

MAXIMUM RATINGS AND CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

| Parameter | Symbol | 6A05 | 6A1 | 6A2 | 6A4 | 6A6 | 6A8 | 6A10 | Unit |
|--|---------------------------|-------------|-----|-----|-----|-----|-----|------|----------------------|
| Marking | | 6A05 | 6A1 | 6A2 | 6A4 | 6A6 | 6A8 | 6A10 | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current @ $T_L=100^{\circ}\text{C}$ | $I_{F(AV)}$ | 6.0 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed On Rated Load | I_{FSM} | 200 | | | | | | | A |
| Instantaneous Forward Voltage $I_F=6.0\text{A}^{(2)}$ | V_F | 1.1 | | | | | | | V |
| Reverse Current $V_R=V_{DC}$ | $T_A=25^{\circ}\text{C}$ | 10 | | | | | | | μA |
| | $T_A=100^{\circ}\text{C}$ | 500 | | | | | | | μA |
| Typical Junction Capacitance 4.0V,1MHz | C_J | 150 | | | | | | | pF |
| Thermal Resistance From Junction to Lead ⁽¹⁾ | $R_{\theta JL}$ | 4.0 | | | | | | | $^{\circ}\text{C/W}$ |
| Operating Junction Temperature Range | T_J | -55 to +125 | | | | | | | $^{\circ}\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to +125 | | | | | | | $^{\circ}\text{C}$ |

Notes:

Note 1: Thermal resistance from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted.

Note 2: Pulse test: 300 μs pulse width, 1% duty cycle

CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

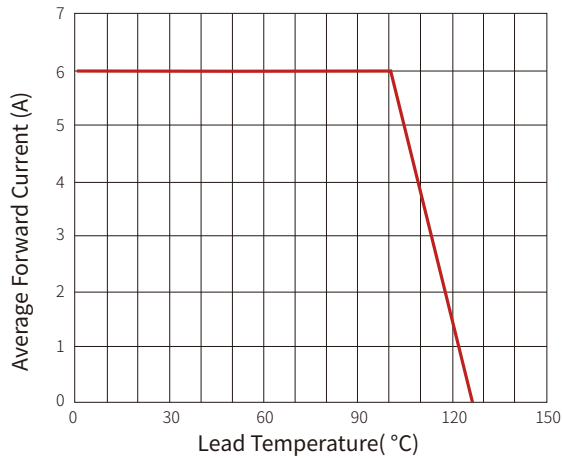


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

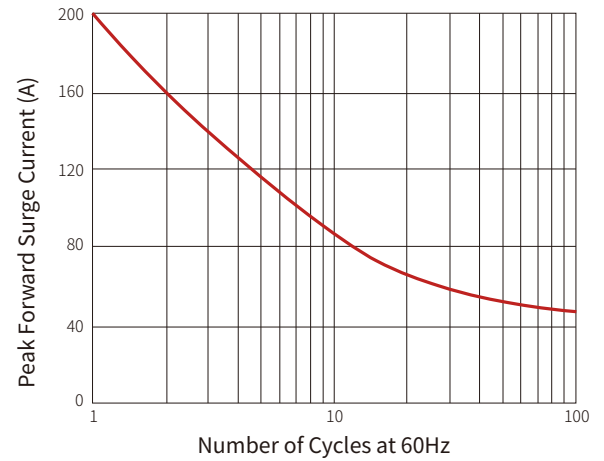


Fig.3 Typical Forward Current Characteristics

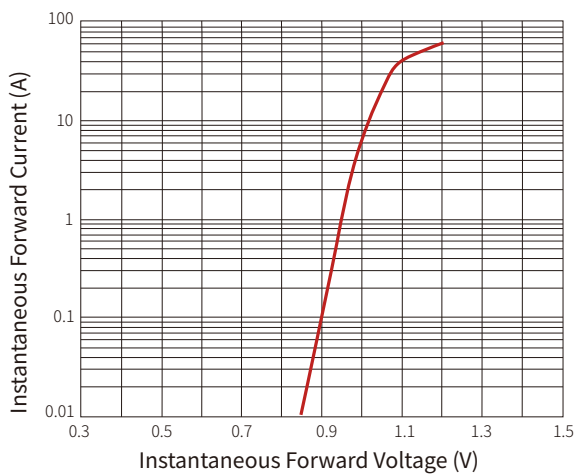
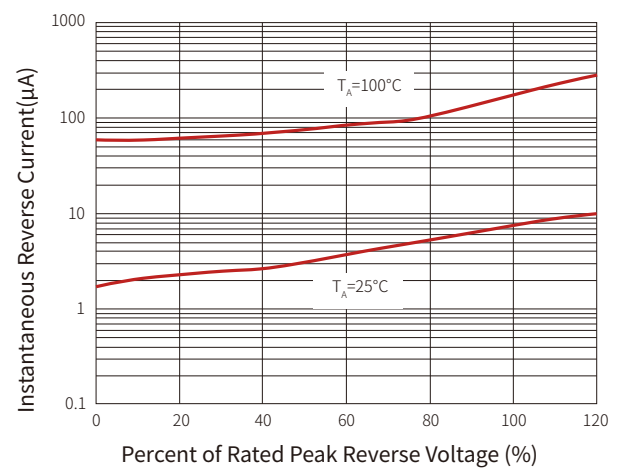
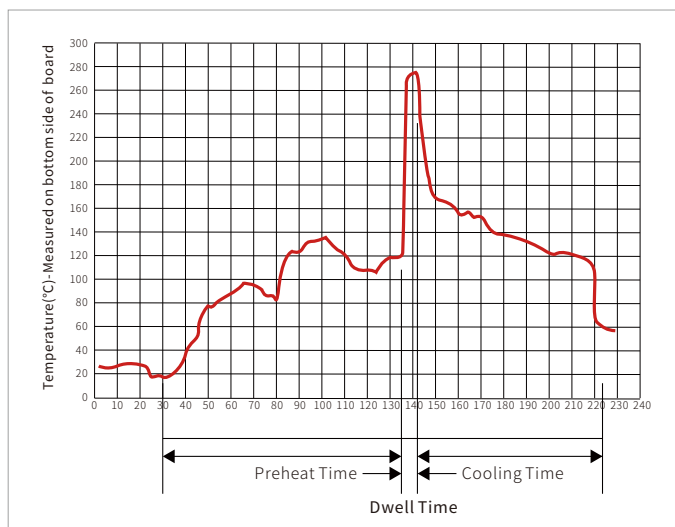


Fig.4 Typical Reverse Characteristics

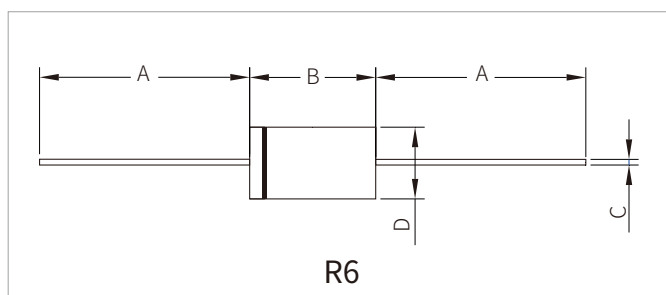


WAVE SOLDERING



| Wave Parameter | | Lead-free assembly |
|------------------------|------------------|--------------------|
| Pre Heat | Temperature Min | 100°C |
| | Temperature Max | 150°C |
| | Time(min to max) | 60 – 180 secs |
| Solder pot Temperature | | 280°C Max |
| Solder Dwell Time | | 2-5 seconds |

P600 PACKAGE INFORMATION



| Ref. | Millimeters | | Inches | |
|------|-------------|------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 25.40 | - | 1.000 | - |
| B | 8.60 | 9.40 | 0.339 | 0.370 |
| C | 1.20 | 1.40 | 0.047 | 0.055 |
| D | 8.60 | 9.10 | 0.339 | 0.358 |

ORDERING INFORMATION

| Part Number | Component Package | QTY/Tape |
|-------------|-------------------|----------|
| 6A05-6A10 | R6/P600 | 400 |

Headquarters

No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

By QR Code

Website



Wechat

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