

■ Features

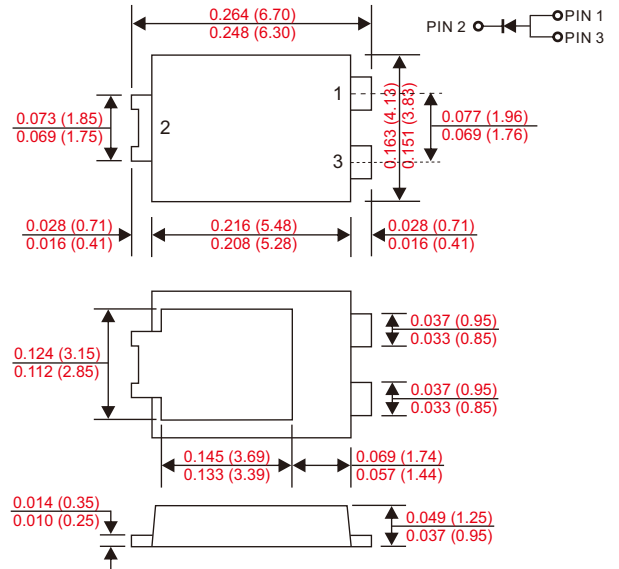
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. CSP20S60SG-A.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, TO-277.
- Lead : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight : Approximated 0.093 grams.

■ Outline

TO-277



Dimensions in inches and (millimeters)

■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Parameter | Conditions | Symbol | CSP20S60S-A | UNIT |
|-----------------------------------|--|-----------------|-------------|------|
| Marking code | | | CSP20S60S | |
| Peak repetitive reverse voltage | | V_{RRM} | 60 | V |
| Working peak reverse voltage | | V_{RWM} | | |
| DC blocking voltage | | V_{RM} | | |
| RMS reverse voltage | | $V_{R(RMS)}$ | 42 | V |
| Forward rectified current | | I_O | 20 | A |
| Forward surge current | 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | I_{FSM} | 320 | A |
| Thermal resistance | Junction to ambient(1) | $R_{\theta JA}$ | 73 | °C/W |
| | Junction to ambient(2) | $R_{\theta JA}$ | 31 | °C/W |
| Operating and Storage temperature | | T_J, T_{STG} | -65 ~ +150 | °C |

| Parameter | Conditions | Symbol | MIN. | TYP. | MAX. | UNIT |
|---------------------------|------------------------------------|-------------|------|------|------|------|
| Reverse breakdown voltage | $I_R = 0.5mA$ | $V_{(BR)R}$ | 60 | | | V |
| Forward voltage drop | $I_F = 20A, T_J = 25^\circ C$ | V_F | | 470 | 530 | mV |
| Reverse current | $V_R = V_{RRM}, T_J = 25^\circ C$ | I_R | | 0.26 | 0.5 | mA |
| | $V_R = V_{RRM}, T_J = 125^\circ C$ | | | | 100 | |

Note : 1.FR-4 PCB, 2oz. Copper.
2.Polyimide PCB, 2oz. Copper.Cathode pad dimensions 18.8mm x 14.4mm.Anode pad dimensions 5.6mm x 14.4mm.

■ Rating and characteristic curves

Fig. 1 - Forward Current Derating Curve

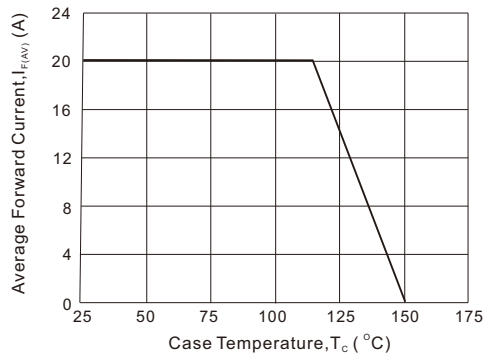


Fig. 2 - Instantaneous Forward Characteristics

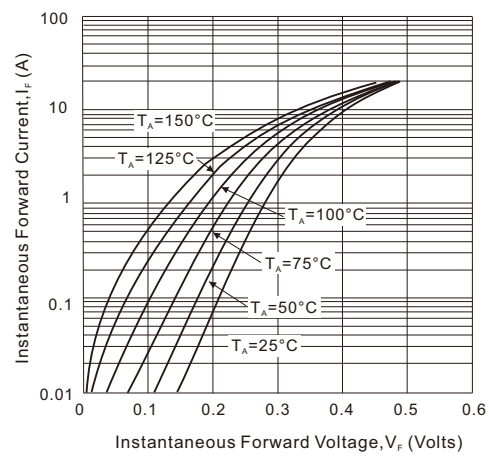
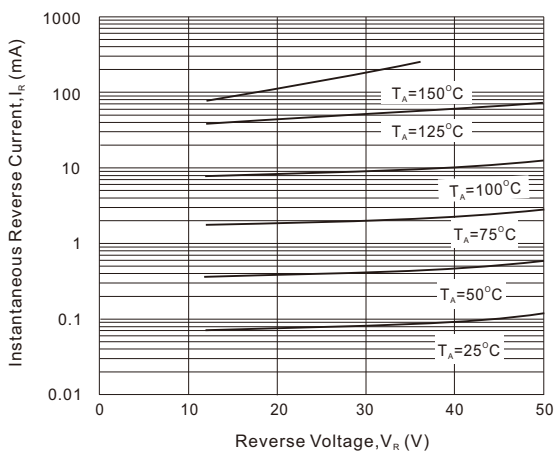
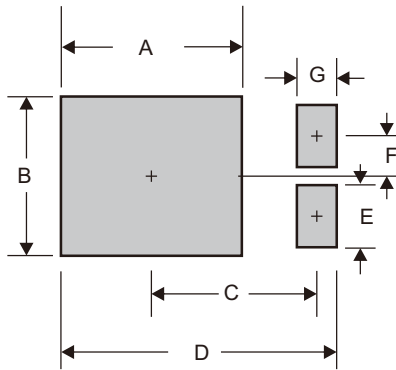


Fig. 3 - Reverse Characteristics



■ TO-277 foot print



| A | B | C | D | E | F | G |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0.185 (4.70) | 0.142 (3.60) | 0.152 (3.87) | 0.260 (6.60) | 0.055 (1.40) | 0.035 (0.90) | 0.031 (0.80) |

Dimensions in inches and (millimeters)

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