

Main Product Characteristics

|             |       |
|-------------|-------|
| $I_{F(AV)}$ | 2x10A |
| $V_{RRM}$   | 60V   |
| $T_J$       | 150°C |
| $V_{(TYP)}$ | 0.46V |

Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. CSF20S60CTG-A.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

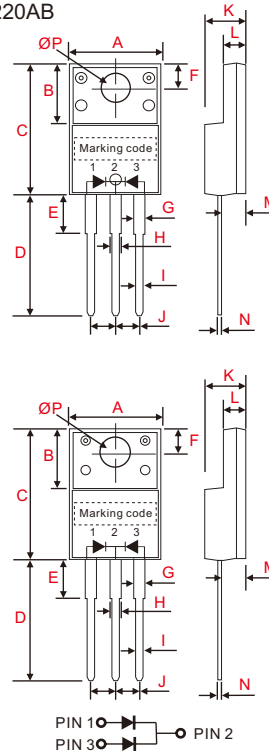
Mechanical data

- Epoxy : UL94-V0 rated flame retardant.
- Case : JEDEC ITO-220AB molded plastic body.
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: As marked.
- Mounting Position : Any.
- Weight : Approximated 2.25 gram.

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%.

Outline ITO-220AB



| symbol | Dimensions in inches(millimeters) |              |
|--------|-----------------------------------|--------------|
|        | Min                               | Max          |
| A      | 0.390(9.9)                        | 0.408(10.36) |
| B      | 0.268(6.8)                        | 0.283(7.2)   |
| C      | 0.583(14.8)                       | 0.598(15.2)  |
| D      | 0.512(13.0)                       | 0.543(13.8)  |
| E      | 0.102(2.6)                        | 0.150(3.8)   |
| F      | 0.101(2.55)                       | 0.112(2.85)  |
| G      | 0.043(1.1)                        | 0.053(1.35)  |
| H      | 0.043(1.1)                        | 0.053(1.35)  |
| I      | 0.020(0.5)                        | 0.028(0.7)   |
| J      | 0.098(2.49)                       | 0.102(2.59)  |
| K      | 0.169(4.3)                        | 0.185(4.7)   |
| L      | 0.112(2.85)                       | 0.128(3.25)  |
| M      | 0.098(2.5)                        | 0.114(2.9)   |
| N      | 0.020(0.5)                        | 0.028(0.7)   |
| ØP     | 0.130(3.3)                        | 0.134(3.5)   |

Alternate

| symbol | Dimensions in inches(millimeters) |              |
|--------|-----------------------------------|--------------|
|        | Min                               | Max          |
| A      | 0.383(9.72)                       | 0.404(10.27) |
| B      | 0.248(6.3)                        | 0.272(6.9)   |
| C      | 0.571(14.5)                       | 0.610(15.5)  |
| D      | 0.516(13.1)                       | 0.547(13.9)  |
| E      | -                                 | 0.161(4.1)   |
| F      | 0.094(2.4)                        | 0.126(3.2)   |
| G      | 0.039(1.0)                        | 0.051(1.3)   |
| H      | 0.039(1.0)                        | 0.051(1.3)   |
| I      | 0.020(0.5)                        | 0.035(0.9)   |
| J      | 0.095(2.41)                       | 0.105(2.67)  |
| K      | 0.169(4.3)                        | 0.189(4.8)   |
| L      | 0.055(1.4)                        | 0.122(3.1)   |
| M      | 0.091(2.3)                        | 0.117(2.96)  |
| N      | 0.014(0.35)                       | 0.031(0.8)   |
| ØP     | 0.122(3.1)                        | 0.142(3.6)   |

| Parameter   | Conditions   | Symbol          | CSF20S60CT-A | UNIT |
|---|--|-----------------|--------------|------|
| Marking code                                      |  |                 | CSF20S60CT   |      |
| Working peak reverse voltage                      |  | $V_{RWM}$       | 60           | V    |
| Forward rectified current (total device)          |  | $I_O$           | 20           | A    |
| Forward surge current (per diode)                 | 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | $I_{FSM}$       | 280          | A    |
| Peak repetitive reverse surge current (per diode) | 2us - 1kHz   | $I_{RRM}$       | 3            | A    |
| Thermal resistance(1)                             | Junction to case   | $R_{\theta JC}$ | 15           | °C/W |
| Storage temperature                               |  | $T_{STG}$       | -55 ~ +150   | °C   |
| Operating Junction temperature                    |  | $T_J$           | -55 ~ +150   | °C   |

| Parameter                        | Conditions                         | Symbol | MIN. | TYP. | MAX. | UNIT |
|----------------------------------|------------------------------------|--------|------|------|------|------|
| Forward voltage drop (per diode) | $I_F = 10A, T_J = 25^\circ C$      | $V_F$  |      |      | 510  | mV   |
|                                  | $I_F = 10A, T_J = 125^\circ C$     |        |      | 460  | 470  |      |
|                                  | $I_F = 20A, T_J = 25^\circ C$      |        |      |      | 710  |      |
| Reverse current (per diode)      | $V_R = V_{RRM}, T_J = 25^\circ C$  | $I_R$  |      |      | 0.5  | mA   |
|                                  | $V_R = V_{RRM}, T_J = 125^\circ C$ |        |      |      | 100  |      |

Note : 1. Thermal resistance from junction to case per leg, with heatsink size(1.35" x 0.95" x 0.18") Al-plate.

■ Rating and characteristic curves

Fig. 1 - Instantaneous Forward Characteristics (per diode)

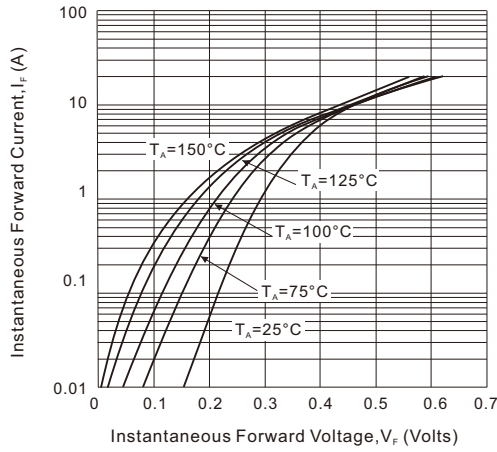


Fig. 1 - Forward Current Derating Curve (per diode)

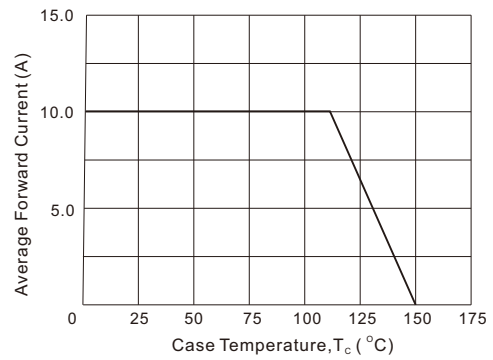
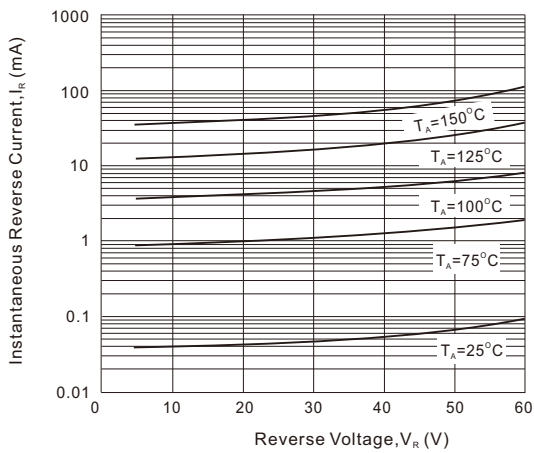


Fig. 3 - Reverse Characteristics (per diode)



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