# CSF20200CT-A

**Chip Integration Technology Corporation**

**Super Low Barrier High Voltage Power Rectifier**

## Main Product Characteristics

| | |
|---|---|
| $I_{F(AV)}$ | 2x10A |
| $V_{RRM}$ | 200V |
| $T_J$ | 175°C |
| $V_{(Typ)}$ | 0.70V |

## ■ Features

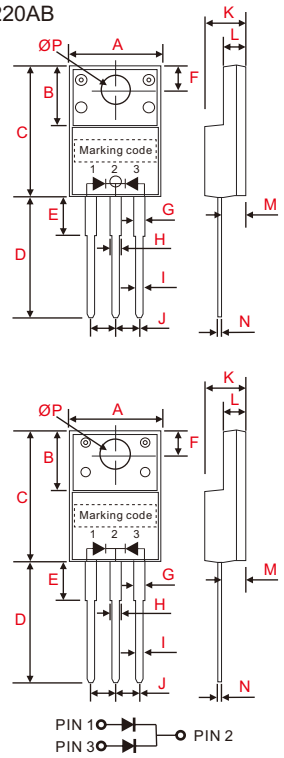
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex.CSF20200CTG-A.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

## ■ 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.

## ■ 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) |

## ■ 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 | CSF20200CT-A | UNIT |
|---|---|---|---|---|
| Marking code | | | CSF20200CT | |
| Peak repetitive reverse voltage<br>Working peak reverse voltage<br>DC blocking voltage | | $V_{RRM}$<br>$V_{RWM}$<br>$V_{RM}$ | 200 | 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) | $I_{FSM}$ | 200 | A |
| Peak repetitive reverse surge current (per diode) | 2us - 1kHz | $I_{RRM}$ | 1 | A |
| Thermal resistance(1) (per diode) | Junction to case | $R_{\theta JC}$ | 4 | °C/W |
| Operating and Storage temperature | | $T_J$, $T_{STG}$ | -55 ~ +175 | °C |

| Parameter | Conditions | Symbol | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|
| Forward voltage drop (per diode) | $I_F$ = 10A, $T_J$ = 25°C | $V_F$ | | | 950 | mV |
| | $I_F$ = 10A, $T_J$ = 125°C | | | 700 | 850 | |
| Reverse current (per diode) | $V_R$ = $V_{RRM}$ $T_J$ = 25°C | $I_R$ | | | 0.1 | mA |
| | $V_R$ = $V_{RRM}$ $T_J$ = 125°C | | | | 10 | |

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



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Revision : C7

■ Rating and characteristic curves

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

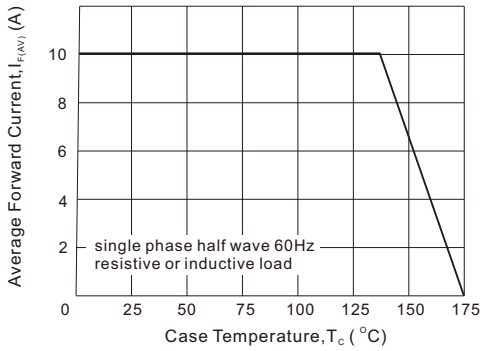



Fig. 2 - Instantaneous Forward Characteristics (per diode)

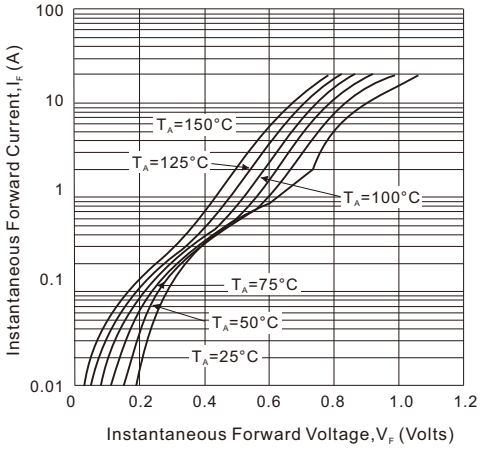
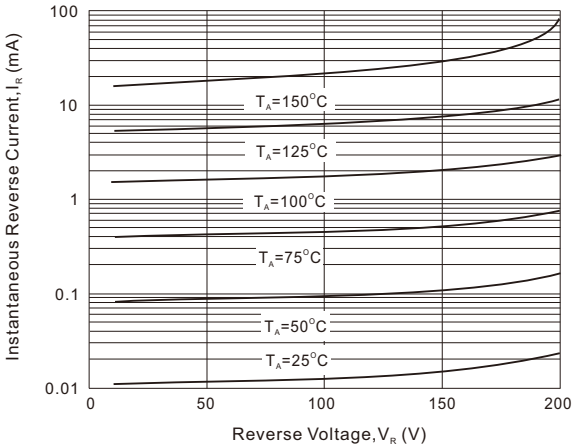



Fig. 3 - Reverse Characteristics (per diode)






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http://www.citcorp.com.tw/ Tel:886-3-5600628 Fax:886-3-5600636
Add:Rm. 3, 2F., No.32, Taiyuan St., Zhubei City, Hsinchu County 302, Taiwan (R.O.C.)



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