

### Main Product Characteristics

|              |         |
|--------------|---------|
| $I_{F(AV)}$  | 2 X 10A |
| $V_{RRM}$    | 60V     |
| $T_J$        | 150°C   |
| $V_{F(Typ)}$ | 0.45V   |

### Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

### Mechanical Data

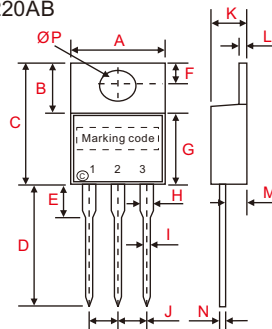
- Epoxy : UL94-V0 rated flame retardant.
- Case : JEDEC TO-220AB molded plastic body.
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : As marked.
- Weight : Approximated 2.25 gram.

### Maximum Ratings

Rating at 25°C ambient temperature unless otherwise specified.

### Outline

TO-220AB



| symbol | Dimensions in inches(millimeters) |             |
|--------|-----------------------------------|-------------|
|        | Min                               | Max         |
| A      | 0.398(10.1)                       | 0.406(10.3) |
| B      | 0.236(6.0)                        | 0.252(6.4)  |
| C      | 0.579(14.7)                       | 0.594(15.1) |
| D      | 0.543(13.8)                       | 0.551(14.0) |
| E      | 0.143(3.63)                       | 0.159(4.03) |
| F      | 0.104(2.64)                       | 0.112(2.84) |
| G      | 0.335(8.5)                        | 0.350(8.9)  |
| H      | 0.046(1.17)                       | 0.054(1.37) |
| I      | 0.028(0.71)                       | 0.036(0.91) |
| J      | 0.098(2.49)                       | 0.102(2.59) |
| K      | 0.176(4.47)                       | 0.184(4.67) |
| L      | 0.046(1.17)                       | 0.054(1.37) |
| M      | 0.102(2.6)                        | 0.110(2.8)  |
| N      | 0.019(0.28)                       | 0.021(0.48) |
| ØP     | 0.147(3.74)                       | 0.155(3.94) |

### Alternate

| symbol | Dimensions in inches(millimeters) |              |
|--------|-----------------------------------|--------------|
|        | Min                               | Max          |
| A      | 0.394(10.0)                       | 0.413(10.5)  |
| B      | 0.228(5.8)                        | 0.268(6.8)   |
| C      | 0.570(14.48)                      | 0.625(15.87) |
| D      | 0.519(13.18)                      | 0.558(14.18) |
| E      | 0.089(3.5)                        | 0.099(3.9)   |
| F      | 0.100(2.54)                       | 0.120(3.04)  |
| G      | 0.330(8.38)                       | 0.350(8.9)   |
| H      | 0.045(1.15)                       | 0.060(1.52)  |
| I      | 0.029(0.75)                       | 0.037(0.95)  |
| J      | 0.095(2.42)                       | 0.105(2.66)  |
| K      | 0.160(4.07)                       | 0.190(4.82)  |
| L      | 0.045(1.15)                       | 0.055(1.39)  |
| M      | 0.080(2.04)                       | 0.110(2.8)   |
| N      | 0.013(0.33)                       | 0.019(0.52)  |
| ØP     | 0.148(3.75)                       | 0.156(3.95)  |

Dimensions in inches and (millimeters)

### Circuit Diagram



| Parameter   | Condition  | Symbol    | C20U60CT   | UNIT |
|---|--|-----------|------------|------|
| 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) | $I_{FSM}$ | 200        | A    |
| Peak Repetitive Reverse Surge Current (per diode) | Pulse width 2us, 1000Hz, square wave at $T_A$ 25°C, 10 cycles        | $I_{RRM}$ | 2          | A    |
| Thermal Resistance (per diode)                    | Junction to case   | $R_{BJC}$ | 2          | °C/W |
|   | Junction to ambient  | $R_{BJA}$ | 50         |      |
| Storage Temperature                               |  | $T_{STG}$ | -55 ~ +150 | °C   |
| Operating Junction Temperature                    |  | $T_J$     | -55 ~ +150 | °C   |

### Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

| Parameter                             | Condition                          | Symbol   | MIN. | TYP.  | MAX. | UNIT |
|---------------------------------------|------------------------------------|----------|------|-------|------|------|
| Forward Voltage Drop (per diode)      | $I_F = 3A, T_J = 25^\circ C$       | $V_F$    |      | 410   |      | mV   |
|                                       | $I_F = 10A, T_J = 25^\circ C$      |          |      | 500   | 560  |      |
|                                       | $I_F = 10A, T_J = 125^\circ C$     |          |      | 450   |      |      |
| Reverse Current (per diode)           | $V_R = V_{RWM}, T_J = 25^\circ C$  | $I_R$    |      | 0.011 | 0.1  | mA   |
|                                       | $V_R = V_{RWM}, T_J = 125^\circ C$ |          |      |       | 40   |      |
| Reverse Breakdown Voltage (per diode) | $I_R = 0.1mA, T_J = 25^\circ C$    | $V_{BR}$ | 60   |       |      | V    |

■ Rating and Characteristic Curves

Fig. 1 - Forward Characteristics

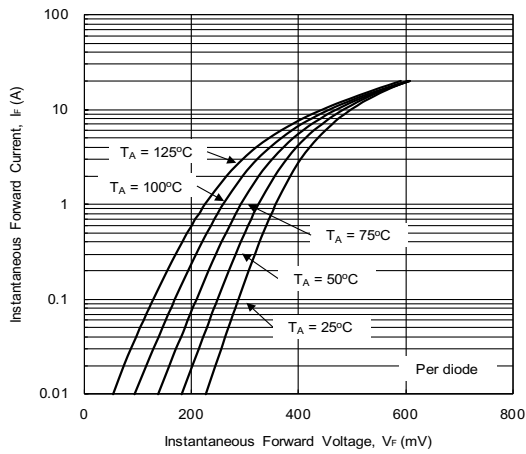


Fig. 2 - Reverse Characteristics

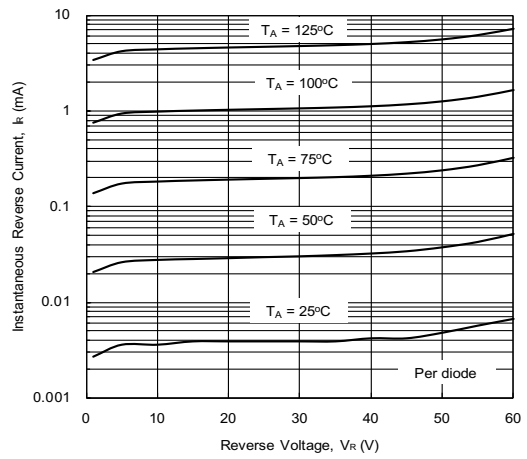


Fig. 3 - Forward Power Dissipation

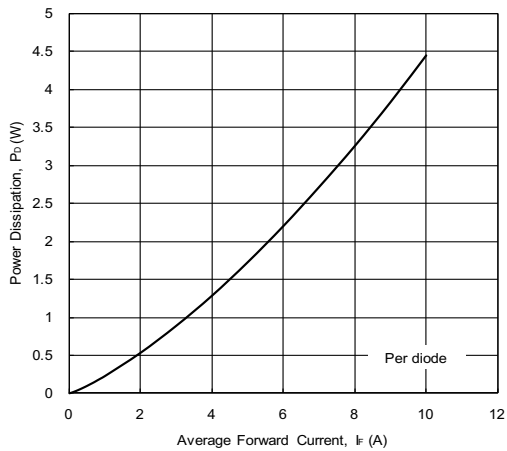


Fig. 4 - Forward Current Derating Curve

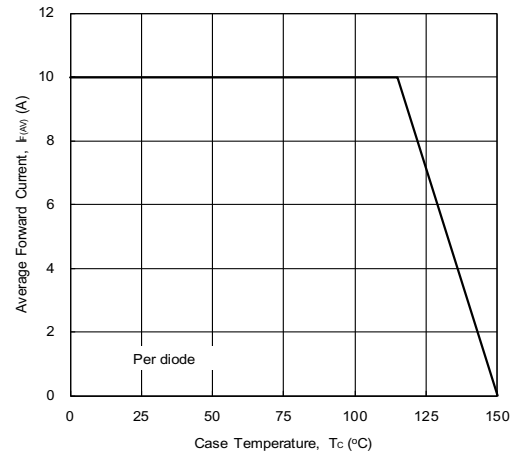
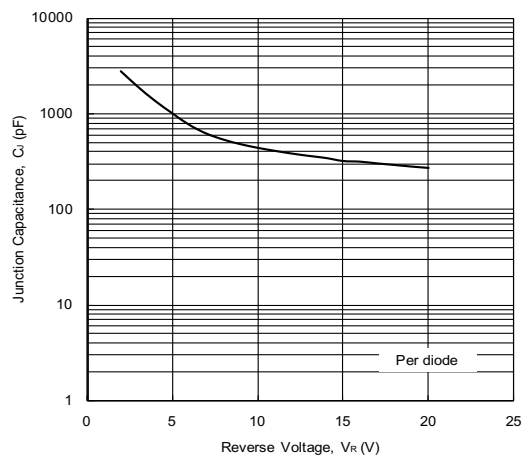
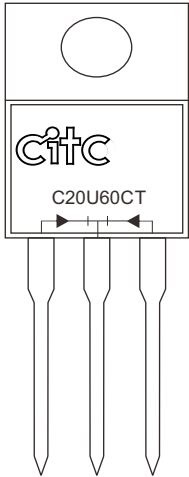



Fig. 5 - Junction Capacitance





■ Marking Information



C20U60CT : Product type marking code

 : CITC Logo

■ Ordering / Packing Information

|   | Part number | Case     | Q'TY/Tube (PCS) | Q'TY/Box (PCS) | Q'TY/Carton (PCS) |
|---|-------------|----------|-----------------|----------------|-------------------|
|  | C20U60CT    | TO-220AB | 50              | 1000           | 5000              |
|  | C20U60CTG   |          |                 |                |                   |

Notes : 1. For packaging details please reference our website at <http://www.citcorp.com.tw/tchinese/products/index.php>

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