

VOLTAGE 40 Volts **CURRENT** 30 Amperes

FEATURES

- Ultra Low forward voltage drop, low power losses
- High efficiency operation
- Lead free in compliance with EU RoHS 2011/65/EU directive

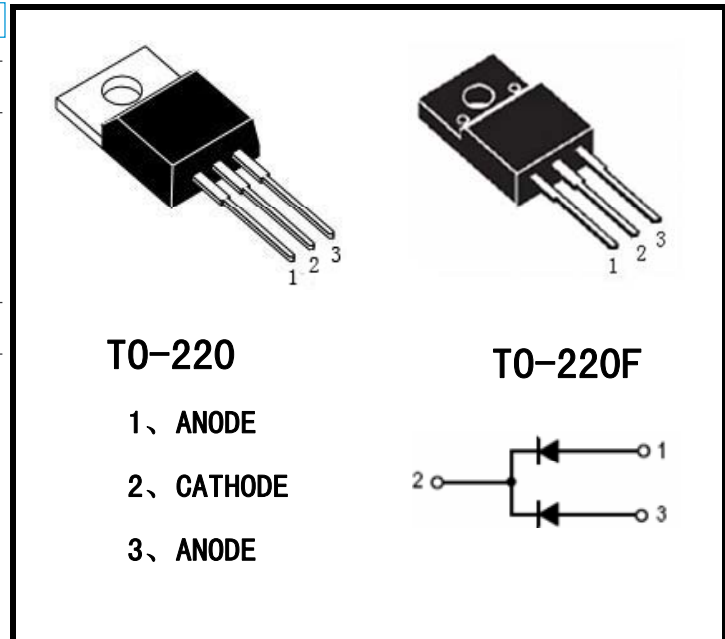
MECHANICAL DATA

Case :Molded Plastic TO-220

Terminals : Solderable per MIL-STD-750, Method 2026

Polarity : As marked

Weight: 0.0514 ounces, 1.46 grams.


MAXIMUM RATINGS(T_A=25°C unless otherwise noted)

| PARAMETER | SYMBOL | VALUE | UNIT |
|---|--------------------|--------------|------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 40 | V |
| Maximum average forward rectified current | I _{F(AV)} | 30 15 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load | I _{FSM} | 300 | A |
| Typical junction capacitance (V _R =4V, f=1MHz) | C _J | 1100 | pF |
| Typical thermal resistance per diode | R _{θJC} | 3.5 | °C/W |
| Operating junction temperature range | T _J | -55 to + 150 | °C |
| Storage temperature range | T _{STG} | -55 to + 150 | °C |

Note : 1. Mounted on infinite heatsink.

ELECTRICAL CHARACTERISTICS(T_A=25°C unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN. | TYP. | MAX. | UNIT |
|---|-----------------|--|----------------|--|----------|----------|
| Breakdown voltage per diode | V _{BR} | I _R =0.5mA | 40 | - | - | V |
| Instantaneous forward voltage per diode | V _F | I _F =1A I _F =5A I _F =15A T _J =25°C | - | 0.28 0.35 0.44 | - | V |
| | | I _F =1A I _F =5A I _F =15A T _J =125°C | - | 0.17 0.27 0.4 | - | V |
| | | Reverse current per diode | I _R | V _R =36V T _J =25°C T _J =125°C | - | 86 20 |
| | | V _R =45V T _J =25°C T _J =125°C | - | - 28 | 320 - | μA mA |

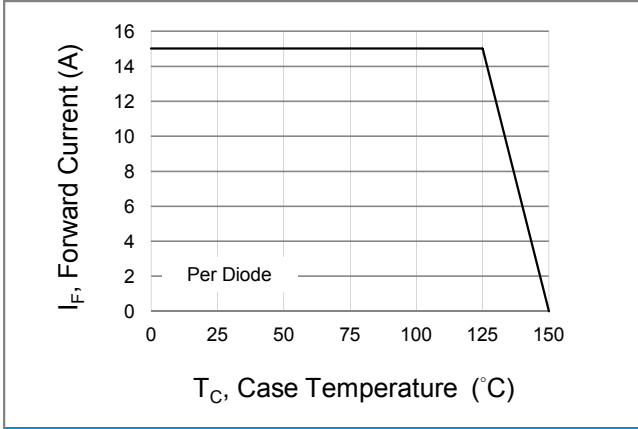


Fig.1 Forward Current Derating Curve

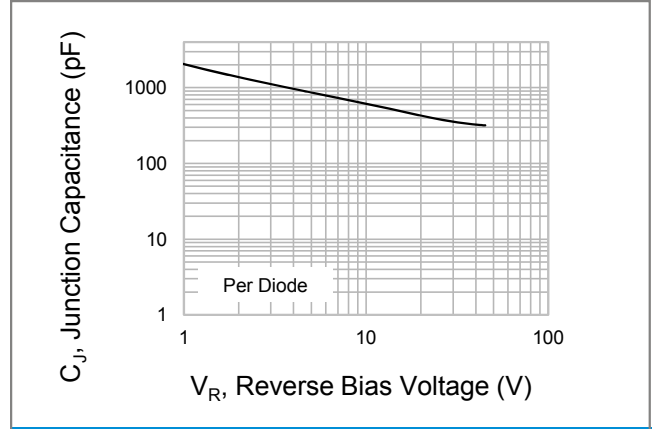


Fig.2 Typical Junction Capacitance

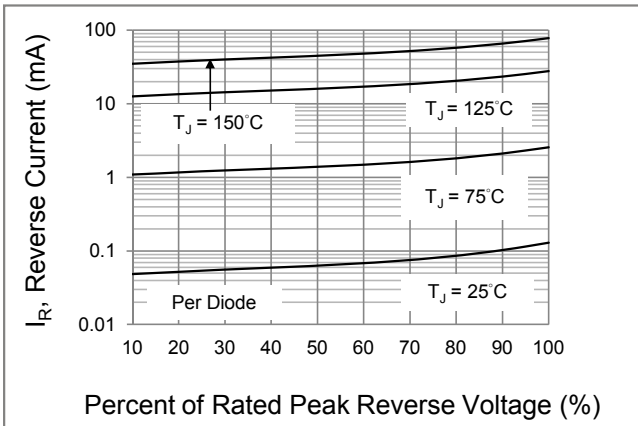


Fig.3 Typical Reverse Characteristics

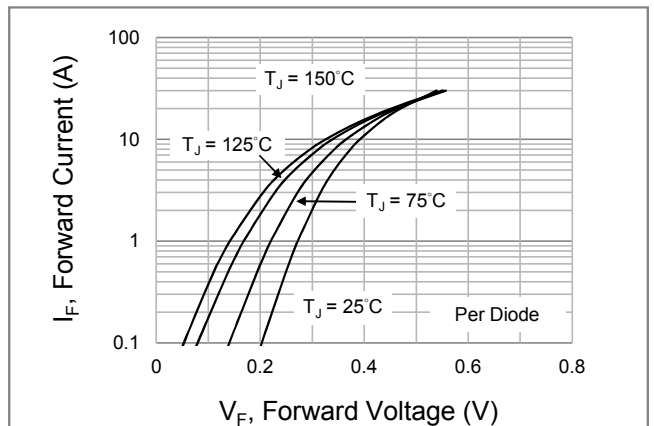


Fig.4 Typical Forward Characteristics

TO-220F MECHANICAL DATA

UNIT: mm

| SYMBOL | MIN | NOM | MAX | SYMBOL | MIN | NOM | MAX |
|--------|------|-----|------|--------|------|------|-------|
| A | 4.5 | | 4.9 | E1 | 6.5 | 7 | 7.5 |
| A1 | 2.3 | | 2.9 | e | 2.44 | 2.54 | 2.64 |
| b | 0.65 | | 0.9 | L | 12.5 | | 14.3 |
| b1 | 1.1 | | 1.7 | L1 | 9.45 | | 10.05 |
| b2 | 1.2 | | 1.4 | L2 | 15 | | 16 |
| c | 0.35 | | 0.65 | L3 | 3.2 | | 4.4 |
| D | 14.5 | | 16.5 | ΦP | 3 | | 3.3 |
| D1 | 6.1 | | 6.9 | Q | 2.5 | | 2.9 |
| E | 9.6 | | 10.3 | | | | |

