



ER1600FCT~ER1606FCT

ISOLATION SUPERFAST RECOVERY RECTIFIER

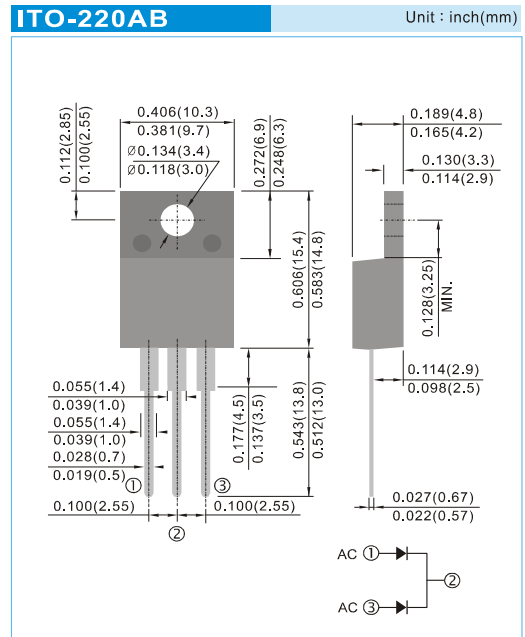
VOLTAGE 50 to 600 Volt **CURRENT** 16 Ampere

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- Super fast recovery times, high voltage.
- Epitaxial chip construction.
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: ITO-220AB Molded plastic
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.056 ounces, 1.6 grams.



MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| PARAMETER | SYMBOL | ER1600FCT | ER1601FCT | ER1601AFCT | ER1602FCT | ER1603FCT | ER1604FCT | ER1606FCT | UNITS |
|---|-----------------|-------------|-----------|------------|-----------|-----------|-----------|-----------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Current at $T_c = 90^\circ\text{C}$ | $I_{F(AV)}$ | 16 | | | | | | | A |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 125 | | | | | | | A |
| Maximum Forward Voltage at 8A | V_F | 0.95 | | | 1.3 | | 1.7 | | V |
| Maximum DC Reverse Current at $T_j = 25^\circ\text{C}$ Rated DC Blocking Voltage $T_j = 100^\circ\text{C}$ | I_R | 1 500 | | | | | | | μA |
| Maximum Reverse Recovery Time (Note 2) | t_{rr} | 35 | | | | | | | ns |
| Typical Junction Capacitance (Note 1) | C_j | 62 | | | | | | | pF |
| Typical Thermal Resistance | $R_{\theta JC}$ | 3 | | | | | | | $^\circ\text{C} / \text{W}$ |
| Operating and Storage Temperature Range | T_j, T_{STG} | -50 to +150 | | | | | | | $^\circ\text{C}$ |

NOTES :

1. Measured at 1 MHz and applied reverse voltage of 4 VDC.
2. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$.
3. Both Bonding and Chip structure are available.



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RATING AND CHARACTERISTIC CURVES

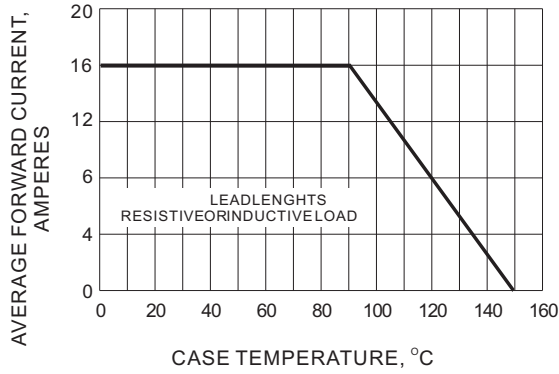


Fig.1- FORWARD CURRENT DERATING CURVE

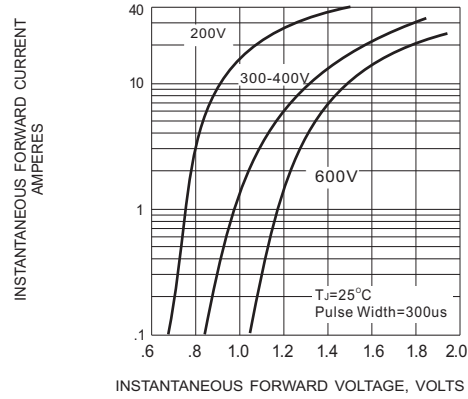


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

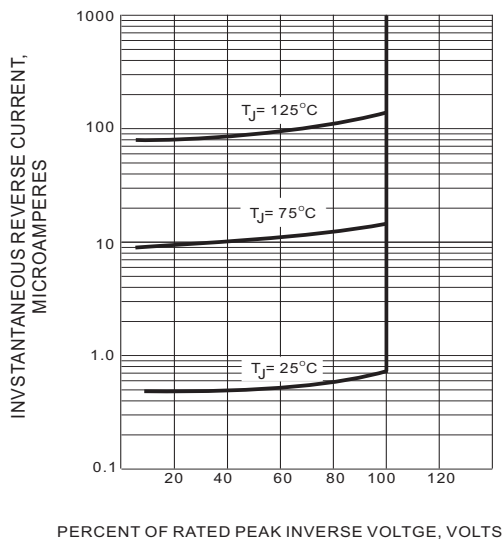


FIG.3 TYPICAL REVERSE CHARACTERISTICS

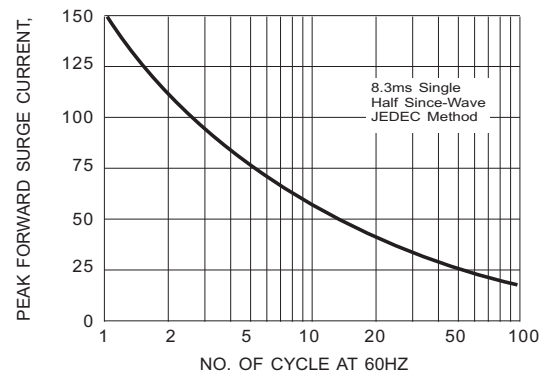


Fig.4- MAXIMUM NON-REPETITIVE SURGE CURRENT

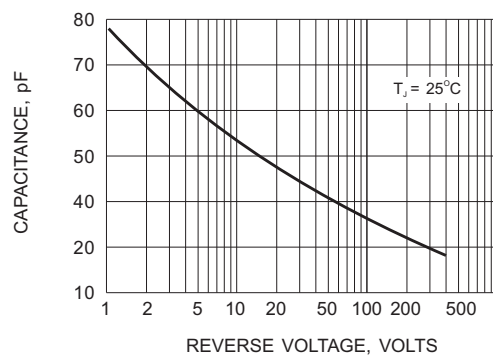


Fig.5- TYPICAL JUNCTION CAPACITANCE



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Part No_packing code_Version

ER1600FCT_T0_00001

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |



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