

5Amp. Ultrafast Plastic Rectifiers

MUR0560F2

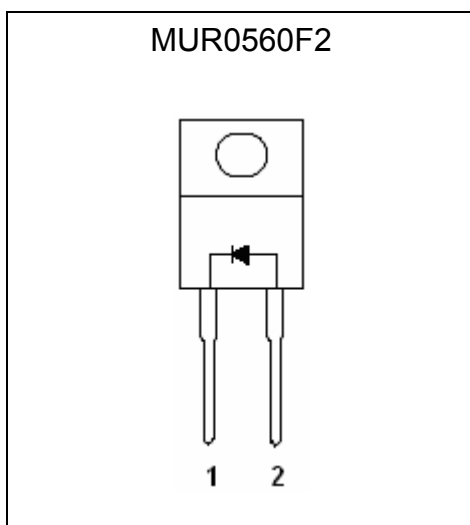
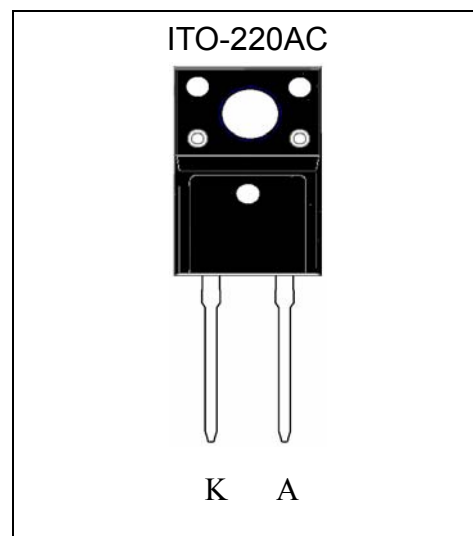
| | |
|--------------|-------|
| $I_{F(AV)}$ | 5A |
| V_{RRM} | 600V |
| I_{FSM} | 80A |
| trr | 60ns |
| T_j | 175°C |
| $V_{F(MAX)}$ | 1.5V |

Features

- 175°C operating junction temperature
- Glass passivated chip junction
- Low leakage current
- Low switching loss, high efficiency
- High forward surge capability
- Insulating package, insulating voltage=2500V AC
- High temperature soldering guaranteed : 260°C/40s, 0.25”(6.35mm) from case
- Pb-free lead plating package

Mechanical Data

- Case: ITO-220AC molded plastic
- Mounting Position: Any
- Weight: 1.85 grams, 0.065 ounce approximately
- Terminals: Pure tin plated, solderable per J-STD-002 and JESD22-B102
- Epoxy: UL 94V-0 rate flame retardant
- Mounting torque: 10 in.-lb. maximum

Equivalent Circuit

Outline


**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 | Symbol | Min. | Typ. | Max. | Units |
|---|---------------------------------------|----------|------|------|------------|
| Maximum Recurrent peak reverse voltage | V_{RRM} | | | 600 | V |
| Maximum RMS voltage | V_{RMS} | | | 420 | V |
| Maximum DC blocking voltage | V_{DC} | | | 600 | V |
| Maximum instantaneous forward voltage at $I_F=5A$ | V_F | | 1.2 | 1.5 | V |
| Maximum Average forward rectified current @ $T_C=100^\circ C$ | $I_{F(AV)}$ | | | 5 | A |
| Non-repetitive peak forward surge current @ 8.3ms single half sine wave superimposed on rated load (JEDEC method) | I_{FSM} | | | 80 | A |
| Maximum instantaneous reverse current at | $V_R=600V, T_C=25^\circ C$ | I_R | | 10 | μA |
| | $V_R=600V, T_C=125^\circ C$ | | | 100 | |
| Maximum reverse recovery time | $I_F=1A, V_R=30V, dI_F/dt=100A/\mu s$ | t_{rr} | | 60 | ns |
| Typical junction capacitance @ $f=1MHz$ and applied 4V reverse voltage | C_J | | 28 | | pF |
| Isolation voltage from terminal to heatsink, $t=1$ minute | V_{AC} | 2500 | | | V |
| Storage temperature range | T_{stg} | -65 | | +175 | $^\circ C$ |
| Operating junction temperature range | T_J | -65 | | +175 | $^\circ C$ |

Thermal Data

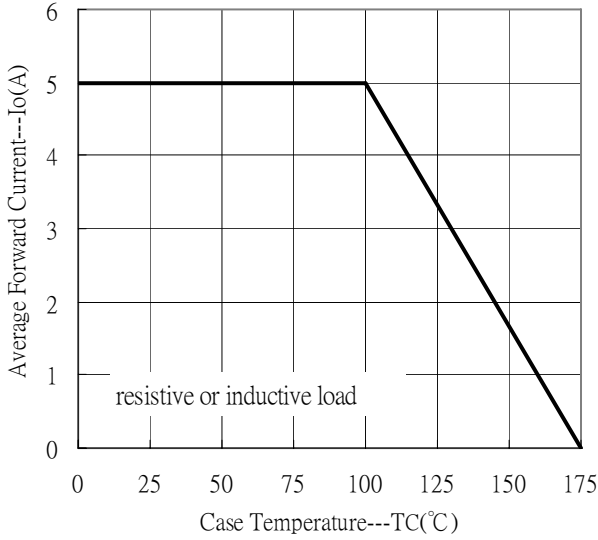
| Parameter | Symbol | Value | Unit |
|---|--------------|-------|--------------|
| Maximum Thermal Resistance, Junction-to-case | $R_{th,j-c}$ | 5 | $^\circ C/W$ |
| Maximum Thermal Resistance, Junction-to-ambient | $R_{th,j-a}$ | 60 | $^\circ C/W$ |

Ordering Information

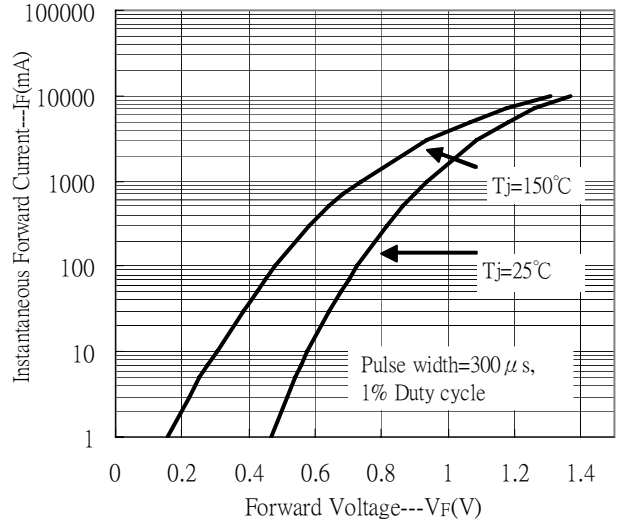
| Device | Package | Shipping |
|-----------|---------------------------------------|-----------------------------|
| MUR0560F2 | ITO-220AC (RoHS compliant package) | 50 pcs / Tube, 40 Tubes/Box |

Characteristic Curves

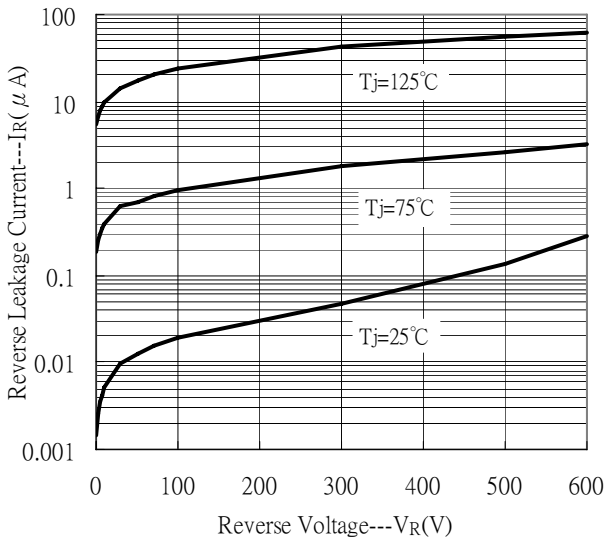
Forward Current Derating Curve



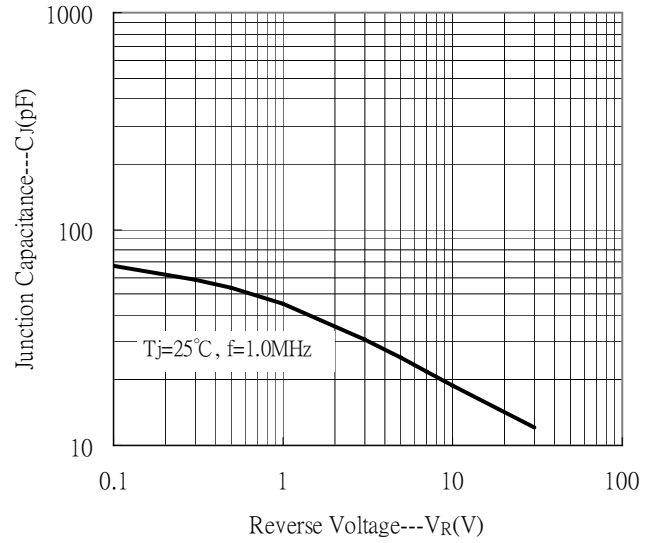
Forward Current vs Forward Voltage



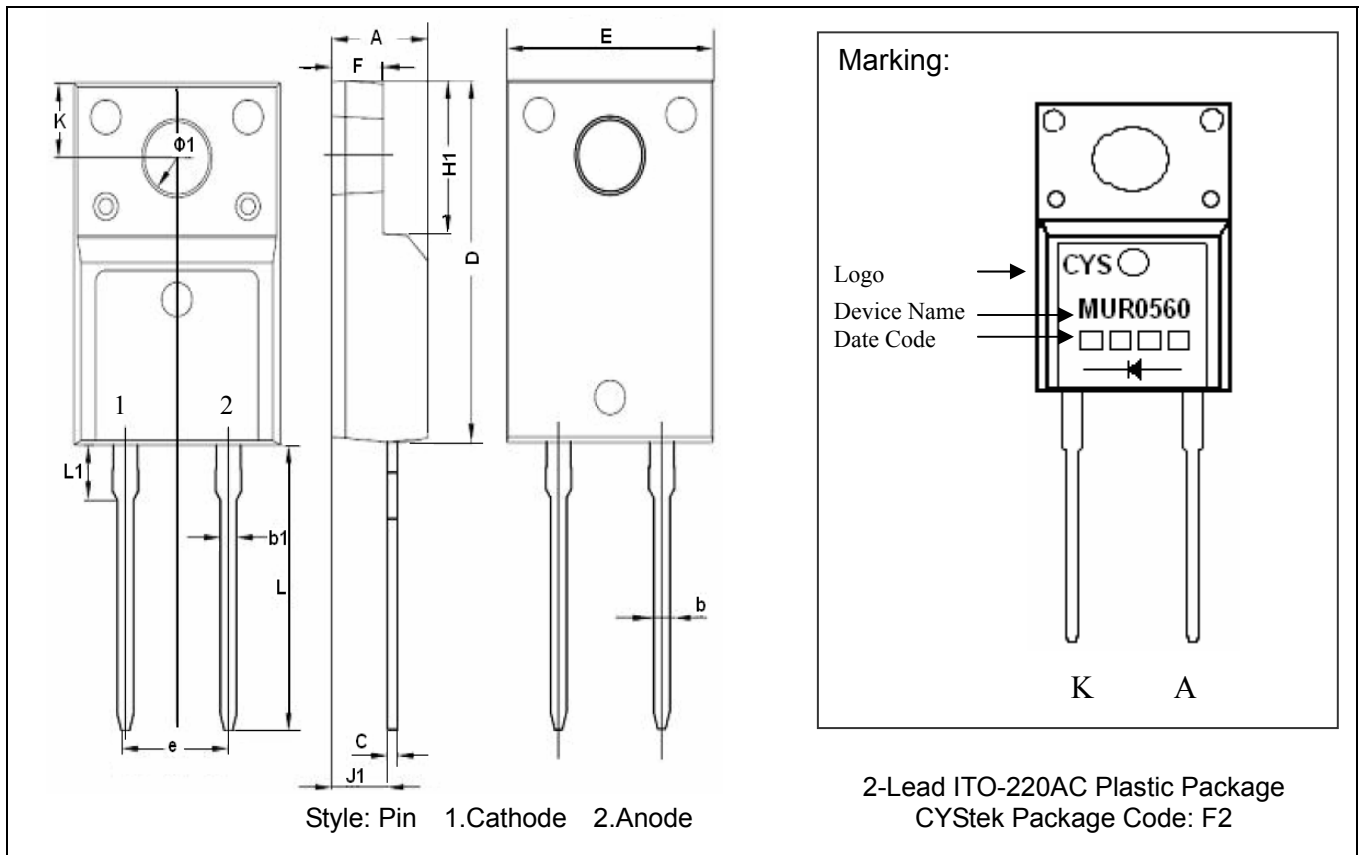
Reverse Leakage Current vs Reverse Voltage



Junction Capacitance vs Reverse Voltage



ITO-220AC Dimension



*: Typical

| DIM | Inches | | Millimeters | | DIM | Inches | | Millimeters | |
|-----|--------|-------|-------------|-------|-----|--------|-------|-------------|-------|
| | Min. | Max. | Min. | Max. | | Min. | Max. | Min. | Max. |
| A | 0.178 | 0.194 | 4.53 | 4.93 | H1 | 0.256 | 0.272 | 6.50 | 6.90 |
| b | 0.028 | 0.036 | 0.71 | 0.91 | J1 | 0.101 | 0.117 | 2.56 | 2.96 |
| C | 0.014 | 0.021 | 0.36 | 0.53 | L | 0.487 | 0.503 | 12.37 | 12.77 |
| D | 0.617 | 0.633 | 15.67 | 16.07 | Φ1 | 0.117 | 0.133 | 2.98 | 3.38 |
| E | 0.274 | 0.408 | 6.96 | 10.36 | b1 | 0.045 | 0.055 | 1.15 | 1.39 |
| F | 0.092 | 0.108 | 2.34 | 2.74 | L1 | 0.088 | 0.104 | 2.23 | 2.63 |
| e | *0.200 | | *5.08 | | K | 0.122 | 0.138 | 3.10 | 3.50 |

Notes: 1.Controlling dimension: millimeters.
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead: Pure tin plated
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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