

General Description

MURF3040CT device optimized for recovery characteristics to improve efficiency in power supply applications.

Features

- Common Cathode
- Super fast switching for high efficiency
- High forward surge current capability
- RoHS Compliant

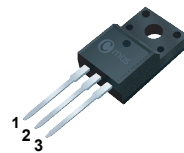
Product Summary

| V _R RM | V _F | I _{F(AV)} |
|-------------------|----------------|--------------------|
| 400V | 1.4V | 30A |

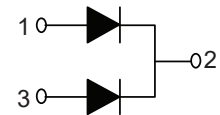
Applications

- Switched Mode Power Supplies (SMPS)
- inverter

TO-220F Pin Configuration



TO-220F
(MURF3004CT)



1. Anode
2. Common Cathode
3. Anode

Absolute Maximum Ratings

| Symbol | Parameter | Rating | Units |
|--------------------|--|----------------------------|-------|
| V _R RM | Peak Repetitive Reverse Voltage | 400 | V |
| I _{F(AV)} | Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle | 15 (Per Leg) 30 (Total) | A |
| T _{RR} | Reverse Recovery Time(I _F =0.5A ,I _R =1A ,I _{REC} =0.25A) | ≤50 | nS |
| I _{FSM} | Forward Peak Surge Current(Rated Load 8.3ms Half Mssine Wave-According to JEDEC Method) | 150X2 | A |
| T _J | Operating Junction Temperature | 150 | °C |
| T _{STG} | Storage Temperature | -40 to 150 | °C |

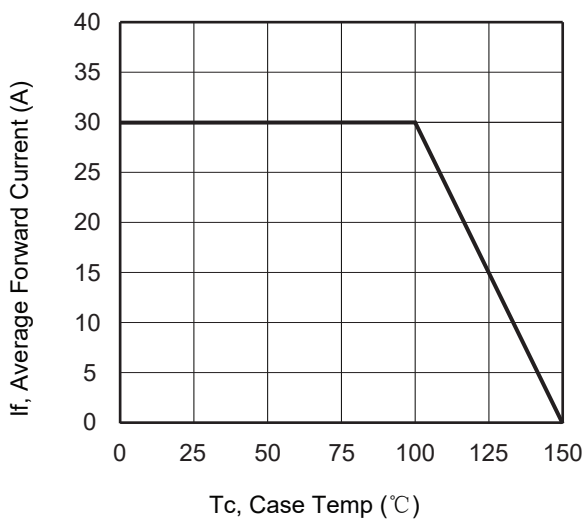
Thermal Data

| Symbol | Parameter | Typ. | Max. | Unit |
|------------------|---|------|------|------|
| R _{θJC} | Thermal Resistance, Junction to Case(Per Leg) | 4 | --- | °C/W |

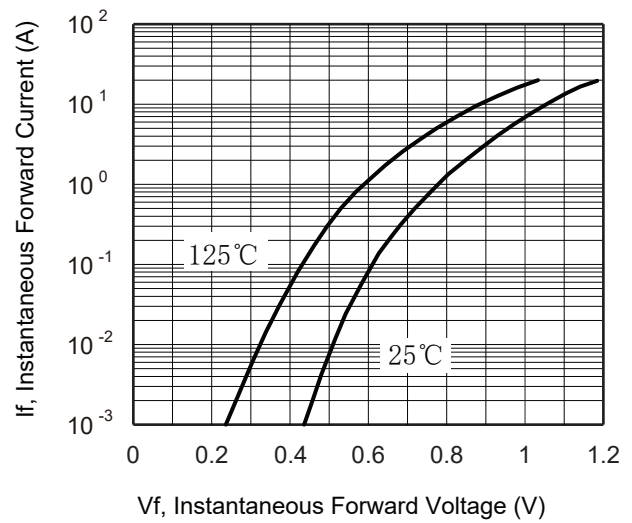
Electrical Characteristics

| Symbol | Parameter | Conditions | Min. | Typ. | Max. | Unit |
|--------|-----------------------------------|---|------|------|------|------|
| V_F | Forward Voltage Drop per diode | $I_F=15A, T_c=25^{\circ}C (I_{FAV}=15A*2)$ | --- | 1.1 | 1.4 | V |
| | | $I_F=15A, T_c=125^{\circ}C (I_{FAV}=15A*2)$ | --- | --- | 1.3 | |
| I_R | Reverse Leakage Current per diode | $V_R=400V, T_c=25^{\circ}C$ | --- | --- | 0.01 | mA |
| | | $V_R=400V, T_c=125^{\circ}C$ | --- | --- | 0.1 | |

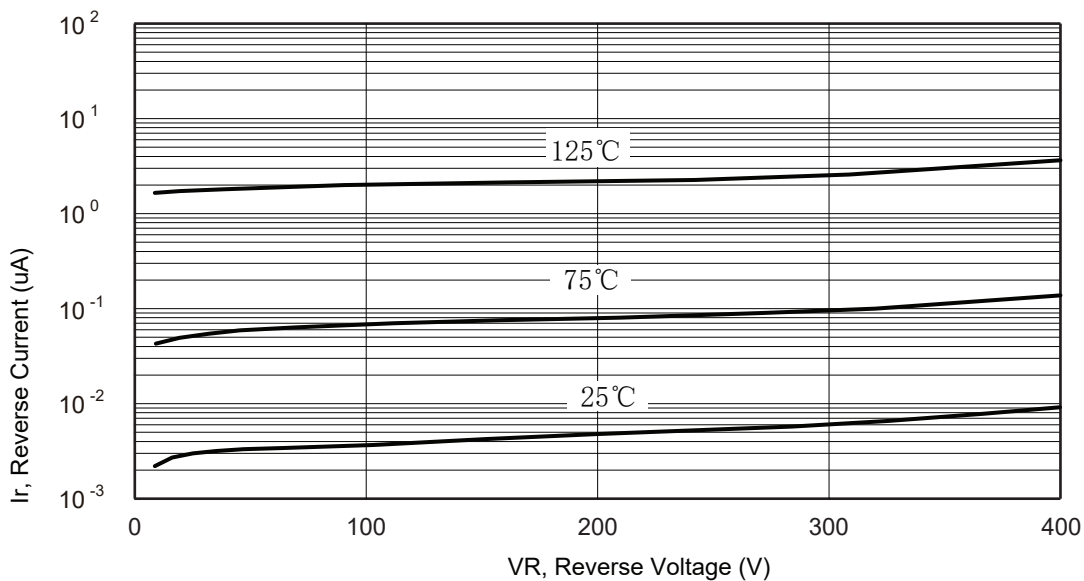
Characteristic Curves



Current derating curve, per element



The forward voltage and forward current curve



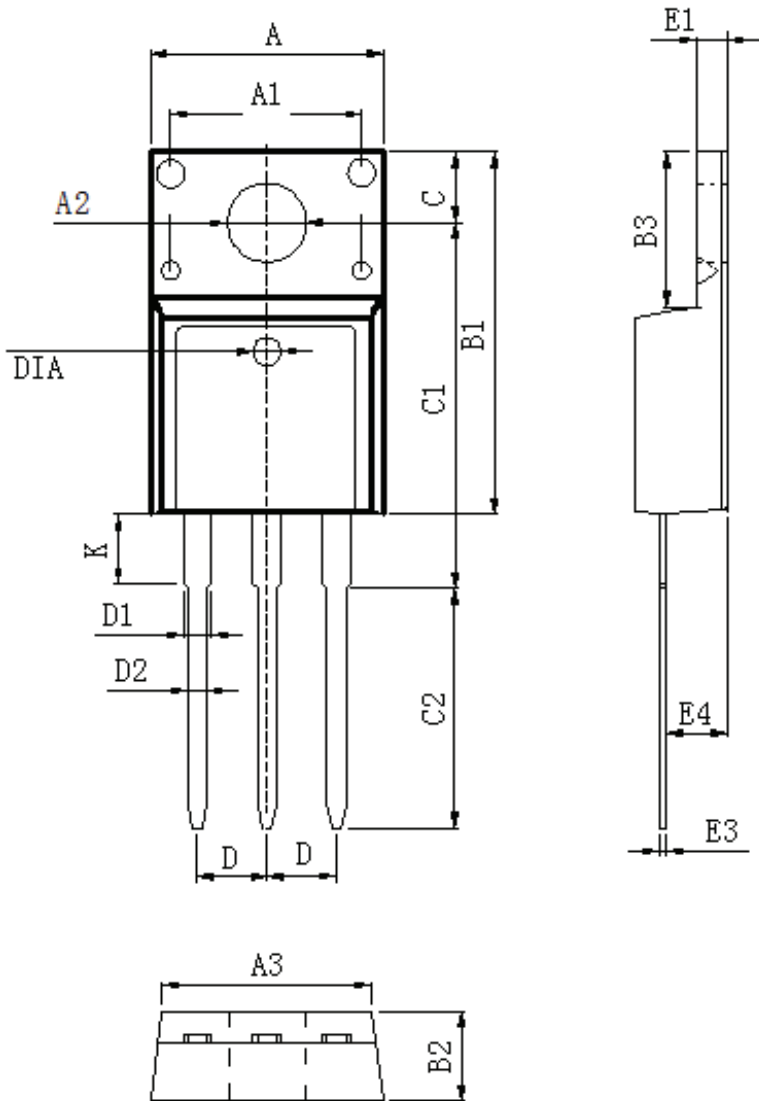
The reverse leak current and the reverse voltage (single-device) curve

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 Cmos assumes no liability for customers' product design or applications.
 Cmos reserves the right to improve product design, functions and reliability without notice. Please refer to the latest version of specification.

Package Dimension

TO-220F

Unit :mm



| DIM | MILLIMETERS |
|-----|-----------------|
| A | 10.16±0.3 |
| A1 | 7.00±0.1 |
| A2 | 3.3±0.2 |
| A3 | 9.5±0.2 |
| B1 | 15.87±0.3 |
| B2 | 4.7±0.2 |
| B3 | 6.68±0.4 |
| C | 3.3±0.2 |
| C1 | 12.57±0.3 |
| C2 | 10.02±0.5 |
| D | 2.54±0.05 |
| D1 | 1.28±0.2 |
| D2 | 0.8±0.1 |
| K | 3.1±0.3 |
| E1 | 2.54±0.1 |
| E3 | 0.5±0.1 |
| E4 | 2.76±0.2 |
| DIA | ⊙1.5 (deep 0.2) |