## Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- High Surge Forward Current Capability
- Glass Passivated Chip
- Halogen Free Available Upon Request By Adding Suffix "-HF"

# 10 Amp Super Fast Recovery Rectifier 400 Volts

## Maximum Ratings

- Operating Junction Temperature Range: -50ºC to +150ºC
- Storage Temperature Range: -50ºC to +150ºC
- Typical Thermal Resistance: 2°C/W Junction to Case

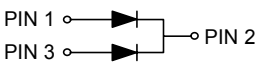
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|---|---|---|---|---|
| SF1040FCT | SF1040FCT | 400V | 280V | 400V |

### Electrical Characteristics @ 25°C Unless Otherwise Specified

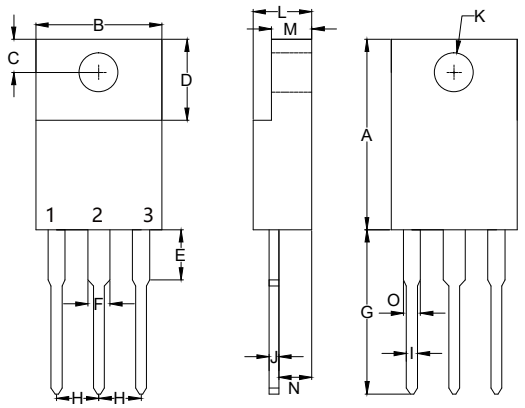
| | | | |
|---|---|---|---|
| Average Forward Current | $I_{F(AV)}$ | 10A | $T_C$=90ºC |
| Peak Forward Surge Current | $I_{FSM}$ | 80A | 8.3ms,Half Sine |
| Maximum Instantaneous Forward Voltage | $V_F$ | 1.3V | $I_{FM}$=5A<br>$T_J$=25ºC |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$ | 5.0μA<br>200μA | $T_J$=25ºC;<br>$T_J$=100ºC |
| Typical Junction Capacitance | $C_J$ | 50pF | Measure at 1MHz, $V_R$=4.0V |
| Maximum Reverse Recovery Time | $t_{rr}$ | 35ns | $I_F$=0.5A; $I_R$=1.0A; Irr=0.25A |

Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

Internal Structure




ITO-220AB




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | 0.567 | 0.642 | 14.40 | 16.30 | |
| B | ----- | 0.421 | ----- | 10.70 | |
| C | 0.085 | 0.128 | 2.15 | 3.25 | |
| D | 0.248 | 0.272 | 6.30 | 6.90 | |
| E | ----- | 0.177 | ----- | 4.50 | |
| F | ----- | 0.071 | ----- | 1.80 | |
| G | 0.500 | 0.539 | 12.70 | 14.20 | |
| H | 0.100 | | 2.55 | | |
| I | ----- | 0.035 | ----- | 0.90 | |
| J | ----- | 0.032 | ----- | 0.80 | |
| K | 0.102 | 0.150 | 2.60 | 3.80 | Φ |
| L | ----- | 0.201 | ----- | 5.10 | |
| M | ----- | 0.140 | ----- | 3.56 | |
| N | 0.083 | 0.126 | 2.10 | 3.20 | |
| O | ----- | 0.071 | ----- | 1.80 | |

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

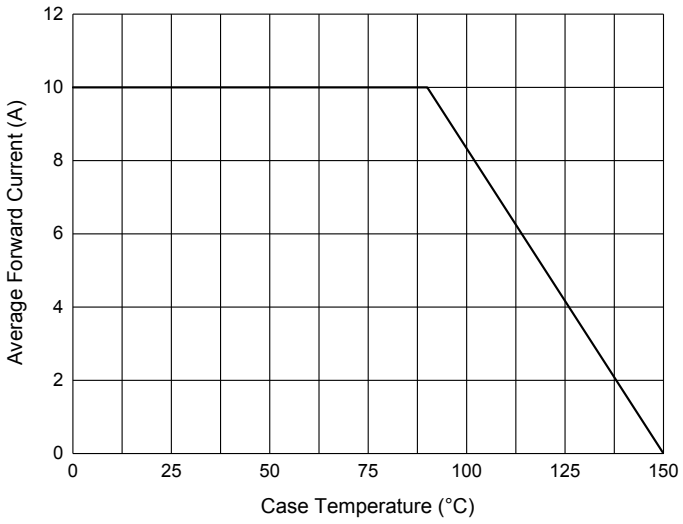



Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

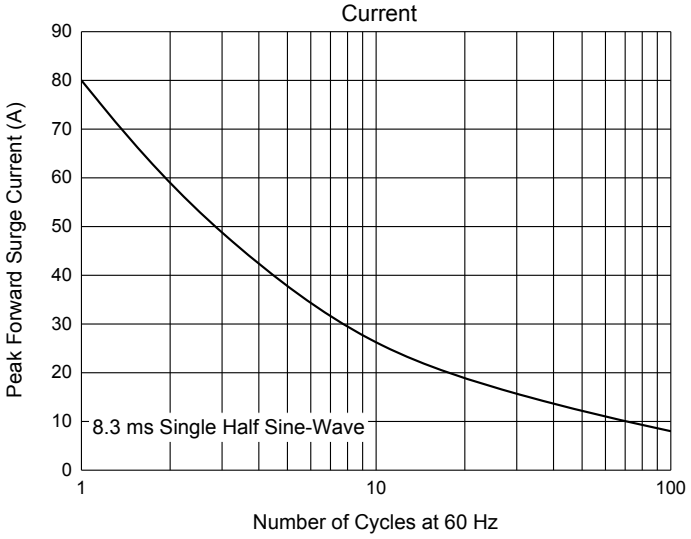



Fig. 3 - Typical Reverse Leakage Characteristics

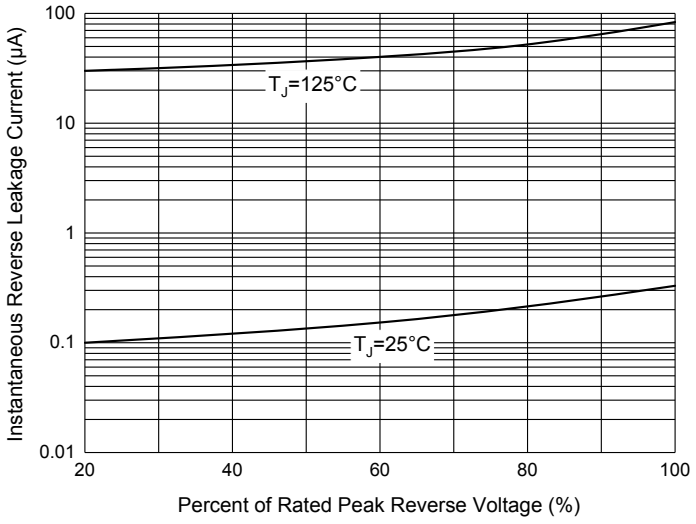
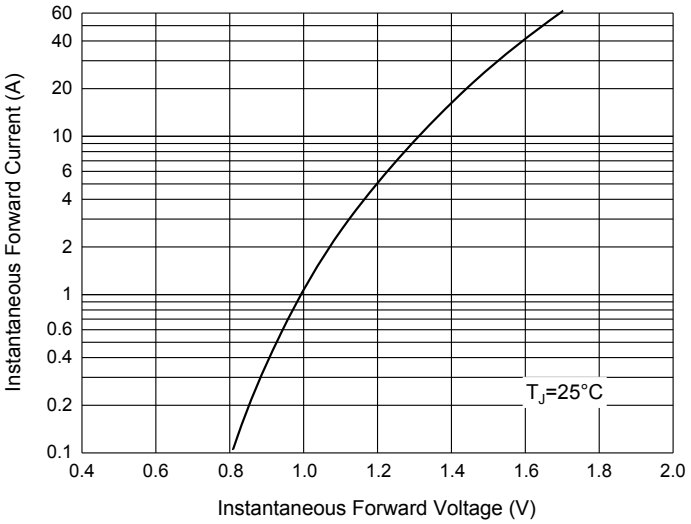



Fig. 4 - Typical Instantaneous Forward Characteristics



## Ordering Information

| Device | Packing |
|---|---|
| Part Number-BP | Bulk:50pcs/Tube,1Kpcs/Box,5Kpcs/Carton |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

# Mouser Electronics

Authorized Distributor

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Micro Commercial Components (MCC):

SF1040FCT-BP