

Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant (Note1) ("P"Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Low Switching Losses and High Efficiency
- Low Reverse Leakage
- Planar Structure Die and Soft Recovery Characteristics

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 4°C/W Junction to Case

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|-------------------|---|---------------------------|-----------------------------------|
| MURS1560FA | MURS1560FA | 600V | 420V | 600V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Average Rectified Forward Current | I _{F(AV)} | 15A | T _C = 55°C |
|--|--------------------|--------------------------------------|---|
| Peak Forward Surge Current | I _{FSM} | 160A | 8.3ms,Half Sine |
| Maximum Instantaneous Forward Voltage | V _F | 1.32V(Typ) 1.6V(Max) 1.4V(Max) | I _F =15A;T _J =25°C I _F =15A;T _J =25°C I _F =15A;T _J =125°C |
| Maximum Reverse Current At Rated DC Blocking Voltage | I _R | 5μΑ 50μΑ | T _J =25°C; T _J =125°C |
| Typical Junction Capacitance | CJ | 100pF | Measured at 1.0MHz, V _R =4.0V |

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

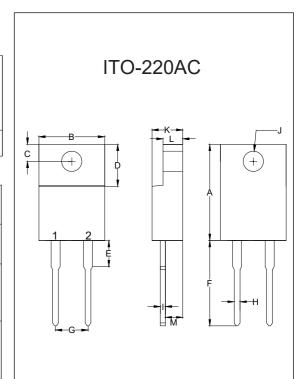
| Reverse Recovery Time | t _{rr} | 31ns(Typ.) 40ns(Max.) | I _F =0.5A; I _R =1.0A; I _{RR} =0.25A | |
|--------------------------|------------------|----------------------------|---|--|
| | | 95ns(Typ.) 145ns(Typ.) | T _J =25°C T _J =125°C | 1 - 45 A |
| Peak recovery current | I _{RRM} | 5.0A(Typ.) 9.5A(Typ.) | T _J =25°C T _J =125°C | $I_F = 15 \text{ A}$ $di_F/dt = 200 \text{ A/}\mu\text{s}$ $V_R = 400 \text{ V}$ |
| Reverse recovery charge | Q _{rr} | 245nC(Typ.) 710nC(Typ.) | T _J =25°C T _J =125°C | |

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

Internal Structure



15 Amp FRED Rectifiers 600 Volts



| | DIMENSIONS | | | | |
|-----|------------|-------|-------|-------|------|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | NOTE |
| Α | 0.567 | 0.606 | 14.40 | 15.40 | |
| В | | 0.406 | | 10.30 | |
| С | 0.100 | 0.112 | 2.55 | 2.85 | |
| D | 0.248 | 0.272 | 6.30 | 6.90 | |
| Е | | 0.161 | | 4.10 | |
| F | 0.500 | 0.543 | 12.70 | 13.80 | |
| G | 0.200 | | 5.10 | | |
| Н | | 0.035 | | 0.90 | |
| I | | 0.032 | | 0.80 | |
| J | 0.102 | 0.134 | 2.60 | 3.40 | Ф |
| K | | 0.189 | | 4.80 | |
| L | | 0.123 | | 3.10 | |
| М | 0.098 | 0.114 | 2.50 | 2.90 | |



Curve Characteristics

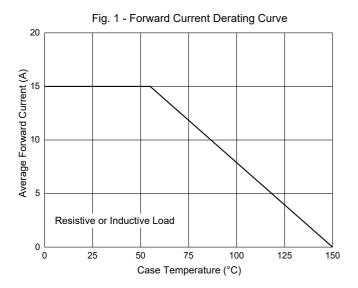


Fig. 3 - Typical Instantaneous Forward Characteristics

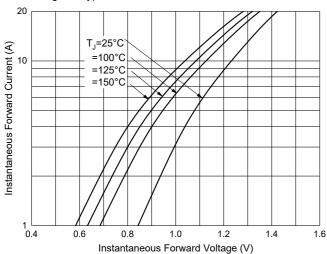


Fig. 5 - Capacitance Characteristics

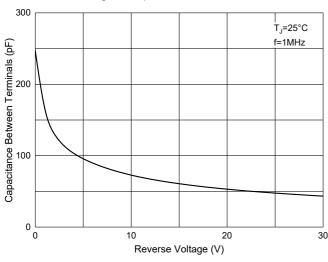


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

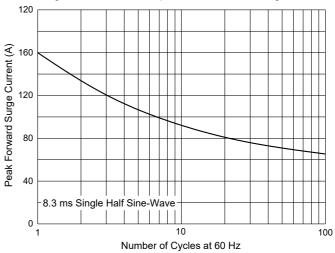


Fig. 4 - Typical Reverse Leakage Characteristics

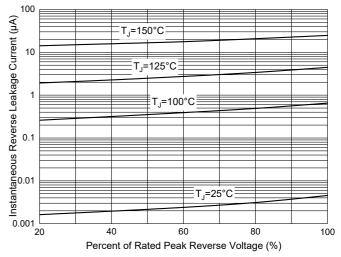
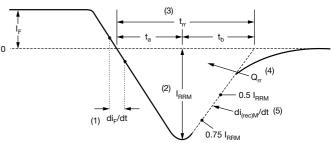


Fig. 6 - Reverse Recovery Waveform and Definitions



- (1) di_F/dt rate of change of current through zero crossing
- (2) I_{RRM} peak reverse recovery current
- (3) t_{rr} reverse recovery time measured from zero crossing point of negative going I_F to point where a line passing through 0.75 I_{RRM} and 0.50 I_{RRM} extrapolated to zero current.
- (4) $\mathbf{Q}_{\rm rr}$ area under curve defined by $\mathbf{t}_{\rm rr}$ and $\mathbf{I}_{\rm RRM}$

$$Q_{rr} = \frac{t_{rr} \times I_{RRM}}{2}$$

(5) $di_{(rec)M}/dt$ - peak rate of change of current during t_b portion of t_{rr}



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

IMPORTANT NOTICE

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp**. does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp**, and all the companies whose products are represented on our website, harmless against all damages. **Micro Commercial Components Corp**, products are sold subject to the general terms and conditions of commercial sale, as published at

https://www.mccsemi.com/Home/TermsAndConditions.

LIFE SUPPORT

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

CUSTOMER AWARENESS

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources. MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Rectifiers category:

Click to view products by Micro Commercial Components (MCC) manufacturer:

Other Similar products are found below:

70HFR40 RL252-TP 150KR30A 1N5397 NTE5841 NTE6038 SCF5000 1N4002G 1N4005-TR JANS1N6640US 481235F
RRE02VS6SGTR 067907F MS306 70HF40 T85HFL60S02 US2JFL-TP A1N5404G-G CRS04(T5L,TEMQ) ACGRA4007-HF
ACGRB207-HF CLH03(TE16L,Q) ACGRC307-HF ACEFC304-HF NTE6356 NTE6359 NTE6002 NTE6023 NTE6039 NTE6077
85HFR60 40HFR60 70HF120 85HFR80 D126A45C SCF7500 D251N08B SCHJ22.5K SM100 SCPA2 SCH10000 SDHD5K VS12FL100S10 ACGRA4001-HF D1821SH45T PR D1251S45T NTE5990 NTE6358 NTE6162 NTE5850