

## 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"



## **Maximum Ratings**

- Operating Junction Temperature Range: -50°C to +150°C
- Storage Temperature Range: -50°C to +150°C
- 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

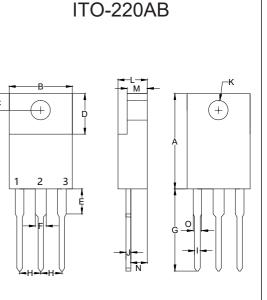
### Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current $I_{F(AV)}$ 10A $T_C=90^{\circ}C$ Peak Forward Surge Current $I_{FSM}$ 80A8.3ms,Half SineMaximum Instantaneous Forward Voltage $V_F$ $1.3V$ $I_{FM}=5A$ $T_J=25^{\circ}C$ Maximum DC Reverse Current At Rated DC Blocking Voltage $I_R$ $5.0\mu A$ $200\mu A$ $T_J=25^{\circ}C$ ; $T_J=100^{\circ}C$ Typical Junction Capacitance $C_J$ $50pF$ Measure at 1MHz, $V_R=4.0V$ Maximum Reverset $25pc$ $I_F=0.5A; I_R=1.0A;$				
Current $I_{FSM}$ $80A$ $8.3MS, Hall Sine$ Maximum Instantaneous Forward Voltage $V_F$ $1.3V$ $I_{FM}=5A$ $T_J=25°C$ Maximum DC Reverse Current At Rated DC Blocking Voltage $I_R$ $5.0\mu A$ $200\mu A$ $T_J=25°C$ ; $T_J=100°C$ Typical Junction Capacitance $C_J$ $50pF$ Measure at 1MHz, $V_R=4.0V$ Maximum Reverse $I_F=0.5A; I_R=1.0A;$	-	I <sub>F(AV)</sub>	10A	T <sub>C</sub> =90⁰C
Instantaneous Forward Voltage $V_F$ $1.3V$ $I_{FM}=5A$ $T_J=25°CMaximum DCReverse Current AtRated DC BlockingVoltageI_R5.0\mu A200\mu AT_J=25°C;T_J=100°CTypical JunctionCapacitanceC_J50pFMeasure at 1MHz,V_R=4.0VMaximum ReverseI_F=0.5A; I_R=1.0A;$	-	I <sub>FSM</sub>	80A	8.3ms,Half Sine
Reverse Current At Rated DC Blocking Voltage $I_R$ $5.0\mu A$ $200\mu A$ $T_J=25^{\circ}C;$ $T_J=100^{\circ}C$ Typical Junction Capacitance $C_J$ $50pF$ Measure at 1MHz, $V_R=4.0V$ Maximum Reverse $I_F=0.5A; I_R=1.0A;$	Instantaneous	V <sub>F</sub>	1.3V	
Capacitance $C_J$ $50pF$ $V_R=4.0V$ Maximum Reverse $I_F=0.5A; I_R=1.0A;$	Reverse Current At Rated DC Blocking	I <sub>R</sub>		<b>v</b>
Maximum Reverse t 35pc I <sub>F</sub> =0.5A; I <sub>R</sub> =1.0A;		CJ	50pF	
Recovery Time		t <sub>rr</sub>	35ns	

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

Internal Structure

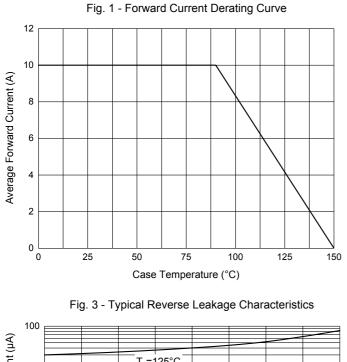
PIN 1 ⊶ -• PIN 2 PIN 3 -

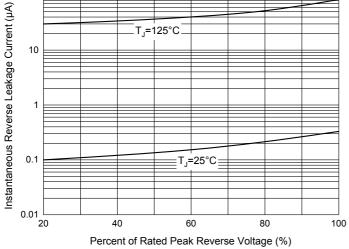


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	NOTE
А	0.567	0.642	14.40	16.30	
В		0.421		10.70	
С	0.085	0.128	2.15	3.25	
D	0.248	0.272	6.30	6.90	
Е		0.177		4.50	
F		0.071		1.80	
G	0.500	0.539	12.70	14.20	
Н	0.1	00	2.5	55	
I		0.035		0.90	
J		0.032		0.80	
Κ	0.102	0.150	2.60	3.80	Φ
L		0.201		5.10	
Μ		0.140		3.56	
Ν	0.083	0.126	2.10	3.20	
0		0.071		1.80	



## **Curve Characteristics**





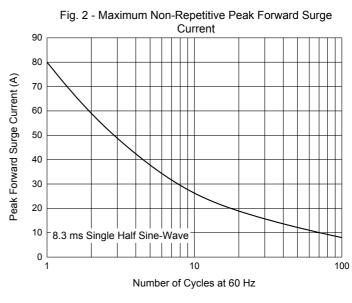
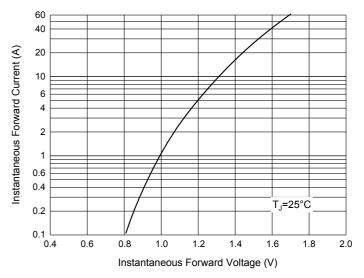


Fig. 4 - Typical Instantaneous Forward Characteristics





## **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

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