Features

- Zero Reverse Recovery Current
- Positive Temperature Coefficient
- High-Speed Switching
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. “Green” Device (Note 1)
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix designates RoHS Compliant. See ordering information)

Benefits

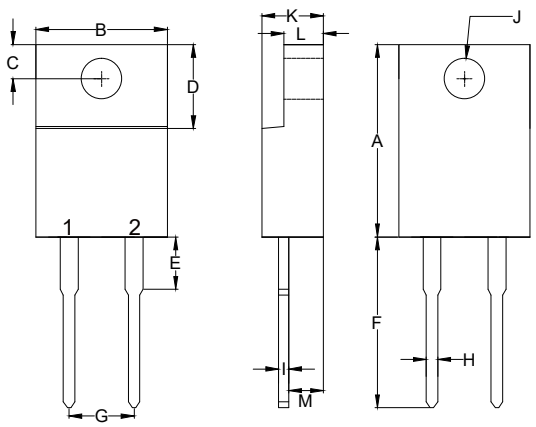
- Temperature-Independent Performance
- Low Switching Loss
- Low Heat Dissipation Requirements

Applications

- Switching Power Supply
- Power Factor Correction
- Motor Drive
- Charging Pile

5 Amp Silicon Carbide Schottky Barrier Rectifier 1200 Volts

ITO-220AC



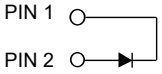
DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.567	0.606	14.40	15.40	
B	-----	0.406	-----	10.30	
C	0.085	0.112	2.15	2.85	
D	0.248	0.272	6.30	6.90	
E	-----	0.161	-----	4.10	
F	0.500	0.559	12.70	14.20	
G	0.200		5.10		
H	-----	0.035	-----	0.90	
I	-----	0.032	-----	0.80	
J	0.102	0.150	2.60	3.80	Φ
K	-----	0.189	-----	4.80	
L	-----	0.123	-----	3.10	
M	0.098	0.114	2.50	2.90	

Maximum Ratings

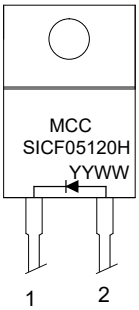
Parameter		Symbol	Rating	Unit
Peak Repetitive Reverse Voltage@ T_j=25°C		V_{RRM}	1200	V
Surge Peak Reverse Voltage@ T_j=25°C		V_{RSM}	1200	V
DC Reverse Voltage@ T_j=25°C		V_{DC}	1200	V
Continuous forward Current	@T_C=25°C	I_F	10	A
	@T_C=125°C		5	
Non-repetitive Peak Forward Surge Current @T_C=25°C, t_p=10ms, Half Sine Pulse		I_{FSM}	50	A
Power Dissipation	@T_C=25°C	P_D	33	W
	@T_C=110°C		14	

Note1:Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
Note2:High Temperature Solder Exemptions Applied, see EU Directive Annex 7a.

Internal Structure:



Device Marking:



Device Code: SICF05120H
Date Code: YYWW (Year & Week)

Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Typ.	Max.	Units
Forward Voltage	V_F	I_F=5A, T_J=25°C	1.4	1.6	V
		I_F=5A, T_J=175°C	2.1		V
Reverse Leakage Current	I_R	V_R=1200V, T_J=25°C	0.5	12	μA
		V_R=1200V, T_J=175°C	1.8		μA
Total Capacitive Charge	Q_C	V_R=800V	27		nC
Total capacitance	C	V_R=0V, f=1MHz	377		pF
		V_R=400V, f=1MHz	25		pF
		V_R=800V, f=1MHz	19		pF
Capacitance Stored Energy	E_C	V_R=800V	7		μJ

Thermal characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Operating Junction Temperature Range	T_J	-55		175	°C
Storage Temperature Range	T_{stg}	-55		175	°C
Thermal Resistance from Junction to Case	Rth_{J-C}		4.5		°C/W

Curve Characteristics

Fig. 1 - Typical Forward Characteristics

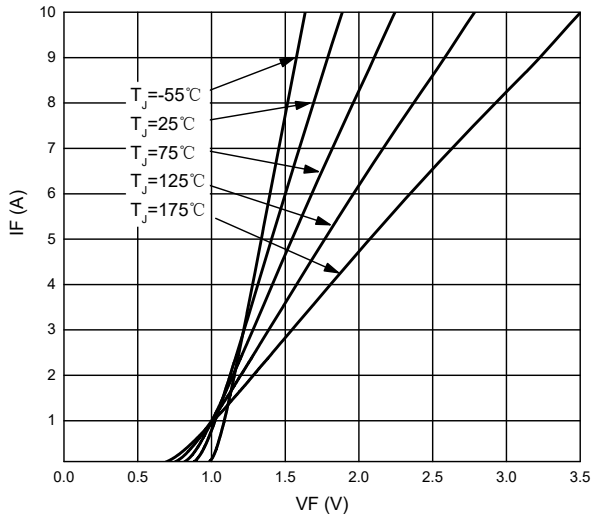


Fig. 2 - Typical Reverse Leakage Characteristics

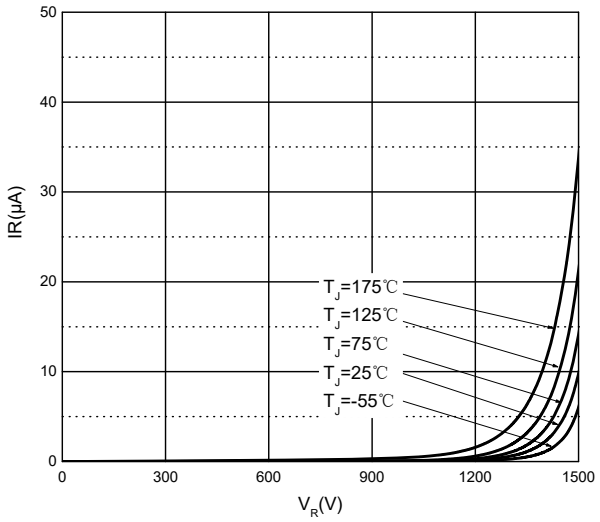


Fig. 3 - Capacitance vs Reverse Voltage

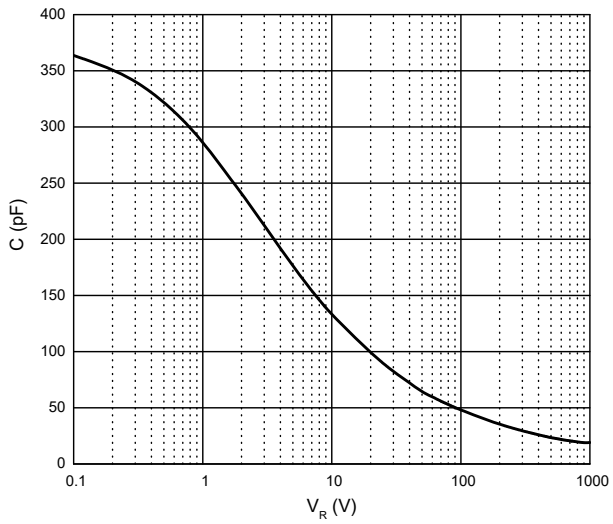


Fig. 4 - Typical Power Derating

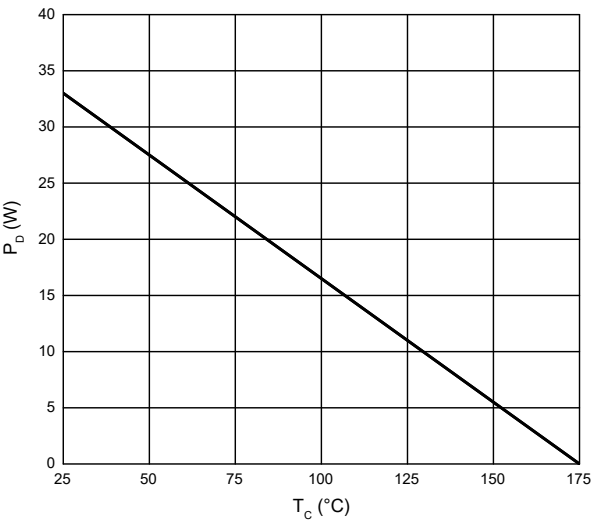


Fig. 5 - Capacitive Charge vs Reverse Voltage

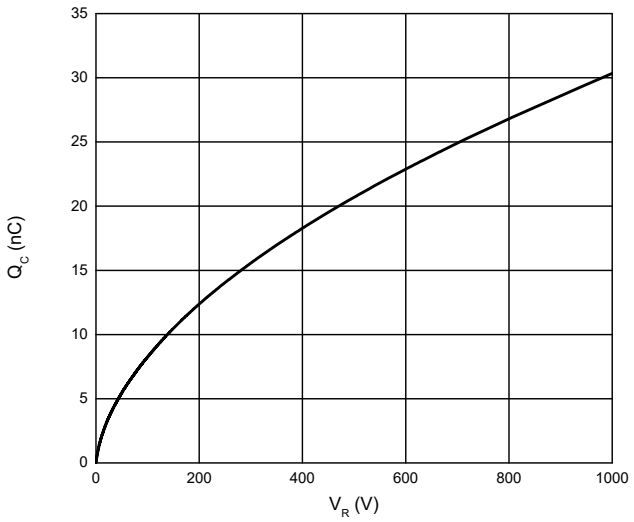
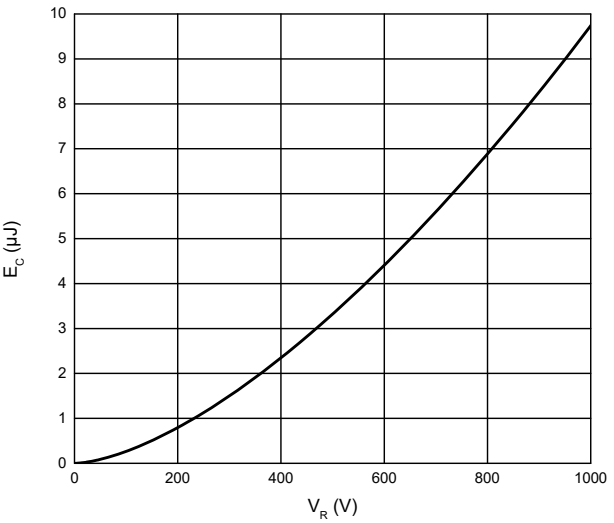


Fig. 6 - Capacitance Stored Energy



Curve Characteristics

Fig. 7 - Current Derating

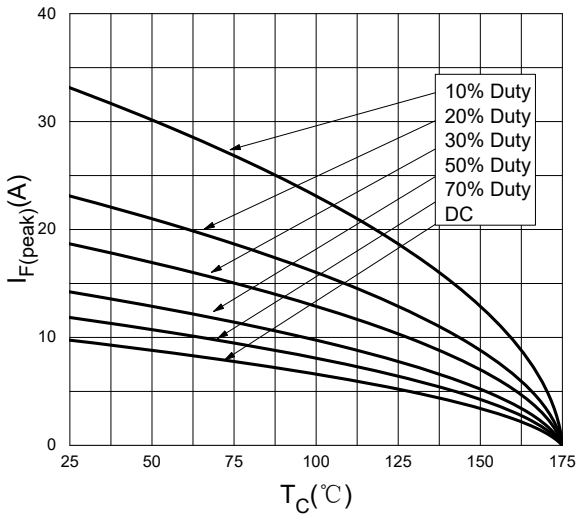
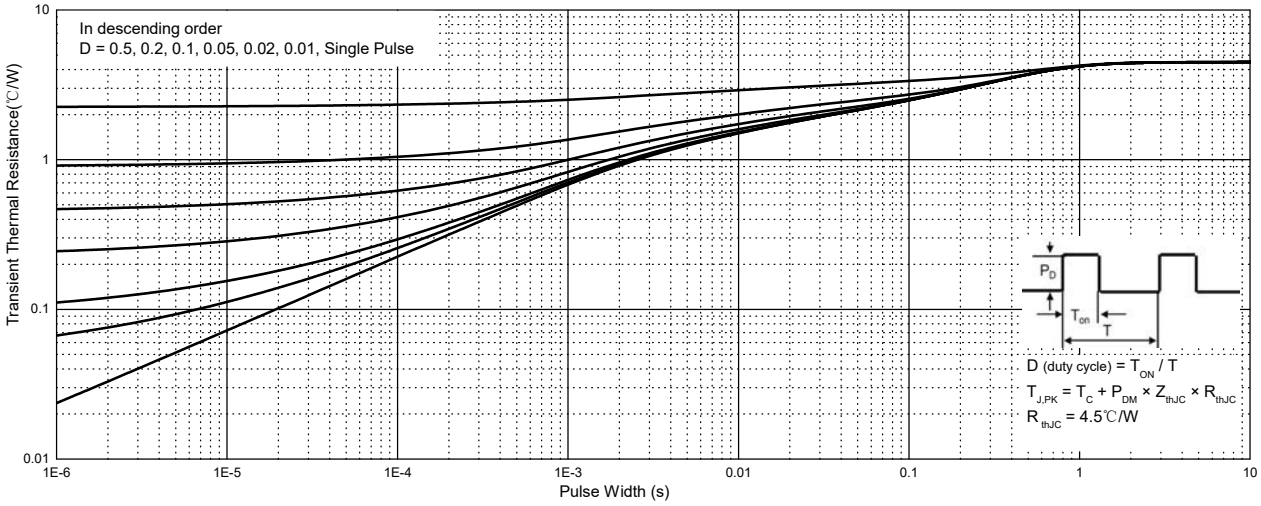


Fig.8 - Transient Thermal Impedance



Ordering Information

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