

Silicon Carbide Schottky Barrier Diode

VRRM	1200 V	l _F	5 A
V _{F(Typ.)}	1.5 V	Qc	17 nC

Features

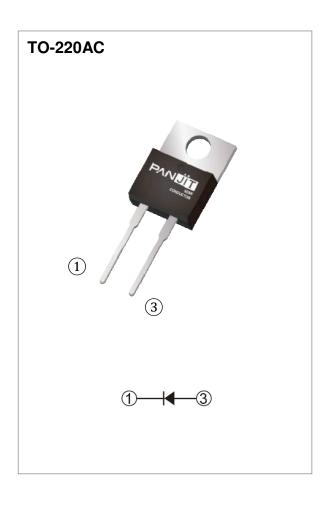
- Temperature Independent Switching Behavior
- High Surge Current Capability
- Positive Temperature Coefficient on V_F
- Low Conduction Loss
- Zero Reverse Recovery
- High junction temperature 175 °C
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case: TO-220AC molded plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.067 ounces, 1.89 grams

Application

• PFC, UPS, PV Inverter, EV Charging Station, Welder



Maximum Ratings and Thermal Characteristics (Tc = 25 °C unless otherwise specified)

PARAMETE	SYMBOL	LIMIT	UNITS		
Repetitive Peak Reverse Voltage	V_{RRM}	1200	V		
DC Blocking Voltage		V _{DC}	1200	V	
Continuous Forward Current	Tc= 160 °C	l _F	5	Α	
Repetitive Peak Surge Current	T _C = 25 °C , t _p =10ms		36	А	
Half Sine Wave, D=0.1	T _C =125 °C , t _p =10ms	IFRM	32		
Peak Forward Surge Current	$T_{C}= 25 {}^{\circ}\text{C}$, $t_{p}=10 \text{ms}$		40		
Half Sine Wave	$T_C=125 ^{\circ}\text{C}$, $t_p=10 \text{ms}$		36	Α	
Peak Forward Surge Current	IFSM		А		
t _p =10us, Pulse		520			
Maximum Power Dissipation	P _{total}	129.3	W		
Operating Junction Temperature Ra	TJ	-55~175	°C		
Storage Temperature Range	T _{STG}	-55~175	°C		

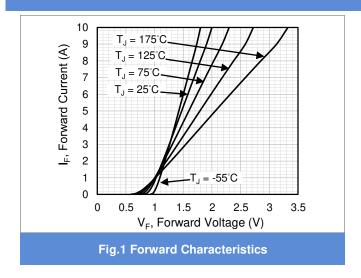


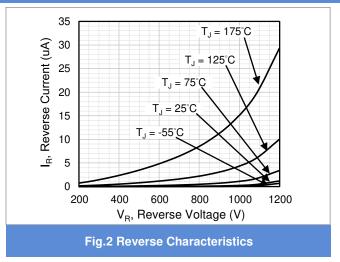
Electrical Characteristics (T_C = 25 °C unless otherwise specified)

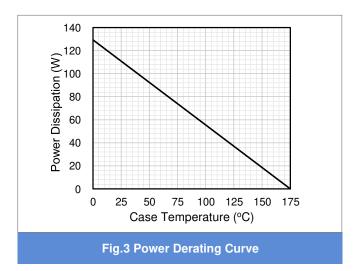
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS	
- IVI	V _F	I _F = 5 A, T _J = 25 °C	-	1.5	1.7		
Forward Voltage Drop		I _F = 5 A, T _J = 175 °C	-	2.0	-	V	
Reverse Leakage Current	I _R	V _R = 1200 V, T _J = 25 °C	-	2	50	μA	
		V _R = 1200 V, T _J = 175 °C	ı	0.03	ı	mA	
Total Capacitive Charge	Qc	$I_F = 5A$, $V_R = 800V$	ı	17	ı	nC	
Total Capacitance	O	$V_R = 1V$, $f = 1MHz$	ı	252	ı	pF	
		$V_R = 400V, f = 1MHz$	ı	13.5	ı	pF	
		$V_R = 800V, f = 1MHz$	-	9	-	pF	
Capacitance Stored Energy	Ec	V _R = 800V	1	4.4	-	μJ	
Thermal Resistance	Rejc		-	1.16	-	°C/W	

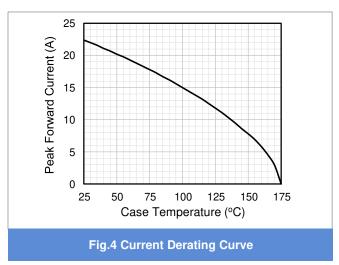


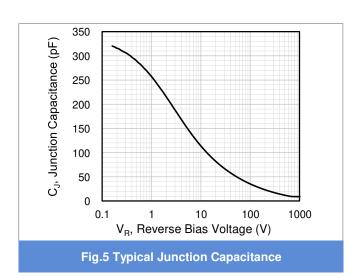
TYPICAL CHARACTERISTIC CURVES

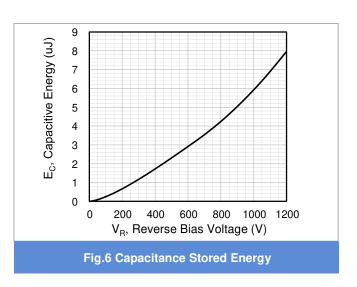










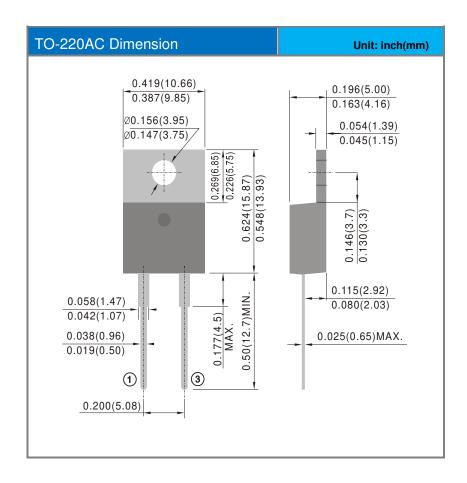




Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PCDP05120G1	TO-220AC	50pcs / Tube	CDP05120G1

Packaging Information





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