

Silicon Carbide Schottky Barrier Diode

V _{RRM}	1200 V	I _F	20 A
V _{F(Typ.)}	1.5 V	Qc	87 nC

Features

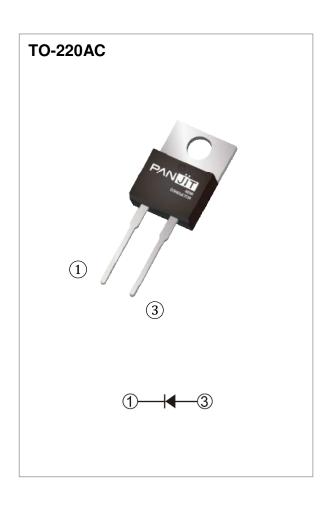
- Temperature Independent Switching Behavior
- High Surge Current Capability
- Positive Temperature Coefficient on V_F
- Low Conduction Loss
- Zero Reverse Recovery
- High junction temperature 175 °C
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

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	T _C = 150 °C	l _F	20	Α	
Repetitive Peak Surge Current	$T_{C}= 25 {}^{\circ}\text{C}$, $t_{p}=10 \text{ms}$		76		
Half Sine Wave, D=0.1	$T_C=125^{\circ}C$, $t_p=10ms$	IFRM	56	Α	
Peak Forward Surge Current	$T_{C}= 25 {}^{\circ}\text{C}$, $t_{p}=10 \text{ms}$		152		
Half Sine Wave	$T_C=125^{\circ}C$, $t_p=10ms$		128	Α	
Peak Forward Surge Current	IFSM	960	А		
t _p =10us, Pulse		960			
Maximum Power Dissipation	P _{total}	267.9	W		
Operating Junction Temperature Ra	TJ	-55~175	°C		
Storage Temperature Range	T _{STG}	-55~175	°C		

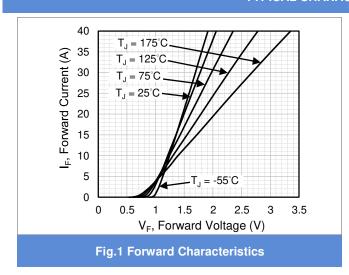


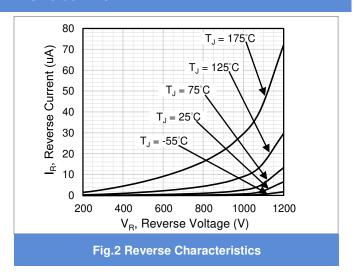
Electrical Characteristics (T_C = 25 °C unless otherwise specified)

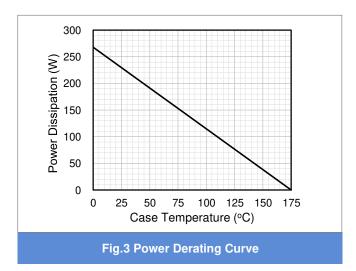
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
	VF	I _F = 20 A, T _J = 25 °C	-	1.5	1.7	V
Forward Voltage Drop		I _F = 20 A, T _J = 175 °C	-	2.0	-	V
Reverse Leakage Current	I _R	V _R = 1200 V, T _J = 25 °C	-	15	180	μA
		V _R = 1200 V, T _J = 175 °C	ı	0.07	ı	mA
Total Capacitive Charge	Qc	I _F = 20 A, V _R = 800V	ı	87	ı	nC
Total Capacitance	O	V _R = 1V, f = 1MHz	-	1040	ı	pF
		V _R = 400V, f = 1MHz	-	77	ı	pF
		V _R = 800V, f = 1MHz	-	57	1	pF
Capacitance Stored Energy	Ec	V _R = 800V	-	25.8	1	μJ
Thermal Resistance	Rejc		-	0.56	-	°C/W

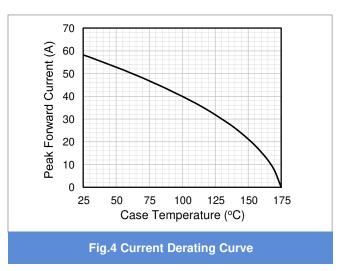


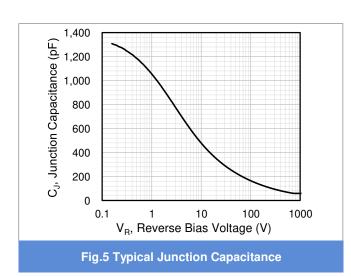
TYPICAL CHARACTERISTIC CURVES

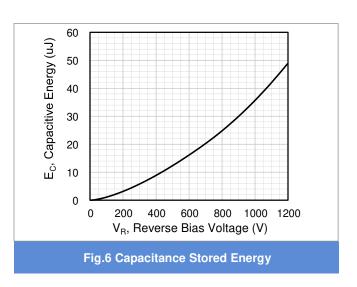










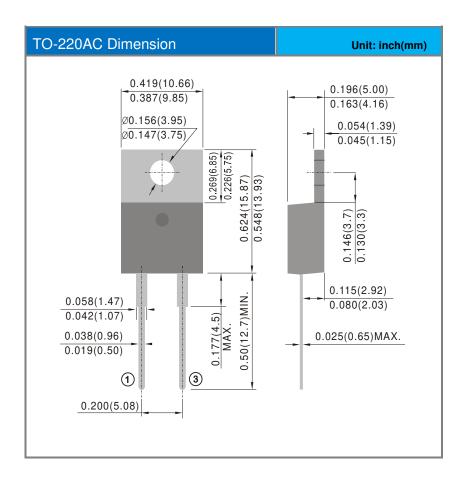




Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PCDP20120G1	TO-220AC	50pcs / Tube	CDP20120G1

Packaging Information





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