

20A, 1200V SIC Schottky Rectifier

FEATURES

- 1200V schottky rectifier
- Zero reverse recovery current
- Zero forward recovery voltage
- Switching characteristics independent on temperature
- Positive temperature coefficient of forward voltage
- High temperature soldering guaranteed: 270°C/10 seconds
- RoHS compliant, halogen free

MECHANICAL DATA

- Case: TO-247
- Case material: molding compound meets UL 94V-0 flammability rating

TYPICAL APPLICATION

General purpose use in HA/VC, SMPS, AC/DC converters, free wheeling diodes in inverter stages.

MAXIMUM RATINGS

T_J=25°C unless otherwise noted

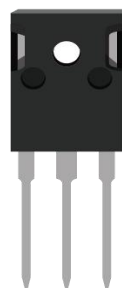
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	1200	V
Cotinuous Forward Current(T _C =130°C)	I _F	20	A
Repetitive Peak Forward Surge Current (tp=10ms, T _C =25°C)	I _{FRM}	50	A
Peak Forward Surge Current (tp=10ms, T _C =25°C)	I _{FSM}	80	A
Non-repetitive Peak Forward Surge Current Per Leg (tp=10ms, T _C =25°C)	I _{FMAX}	600	A
Power Dissipation, Per Leg T _C =25°C T _C =110°C	P _{tot}	153 66	W
Operating Junction Temperature Range	T _J	-55 to +175	°C
Storage Temperature Range	T _{STG}	-55 to +175	°C

ELECTRICAL CHARACTERISTICS

T_J=25°C unless otherwise noted

Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@I _F =10A	T _J =25°C	V _F	1.5	1.8	V
	T _J =175°C		2.2	3.0	
Reverse Current @ V _{RRM}	T _J =25°C	I _R	2	5	μA
	T _J =175°C		20	40	
Total Capacitance	V _R =0V, f=1MHz	C	610	-	pF
	V _R =400V, f=1MHz		46	-	
	V _R =800V, f=1MHz		36	-	
Total Capacitance Charge	V _R =800V	Q _C	50	-	nC
Capacitance Stored Energy	V _R =800V	E _C	25	-	μJ
Thermal Resistance	Junction to case	R _{θJC}	1.15		°C/W

TO-247



RoHS
COMPLIANT

HALOGEN
FREE

1 2 3



20A, 1200V SiC Schottky Rectifier

RATINGS AND CHARACTERISTIC CURVES

FIG.1: Forward Characteristics

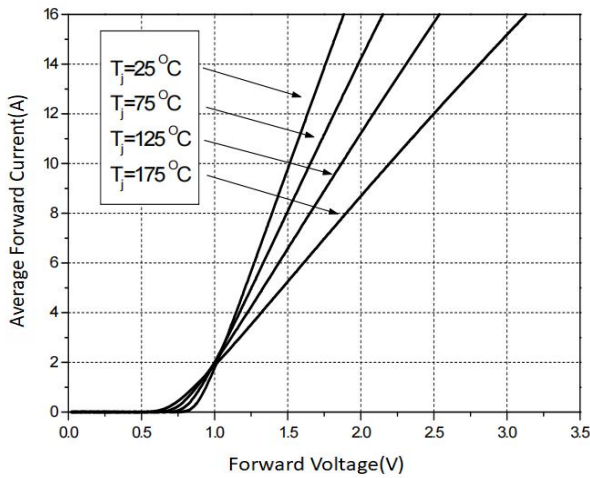


FIG.2: Reverse Characteristics

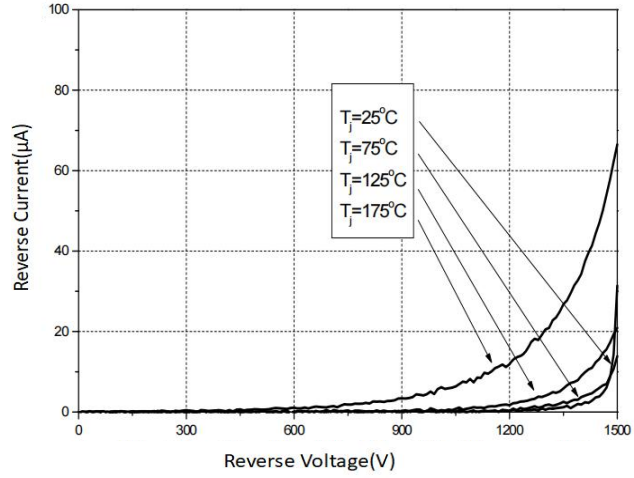


FIG.3: Capacitance Charge vs. Reverse Voltage

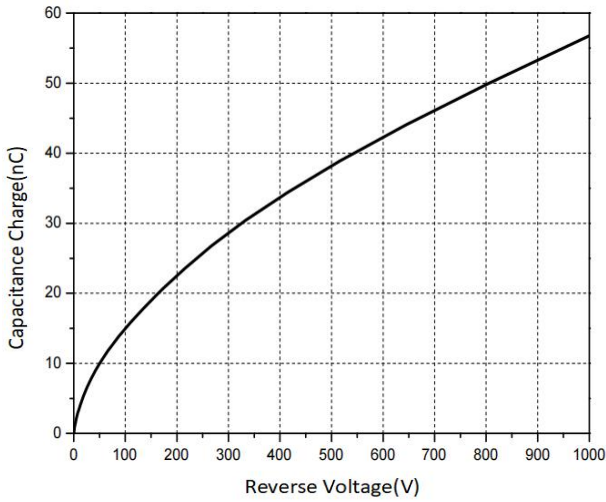


FIG.4: Capacitance Stored Energy

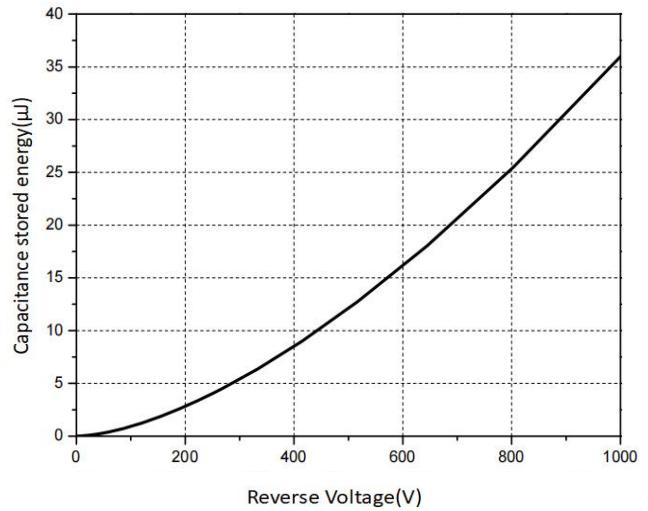


FIG.5: Power Derating

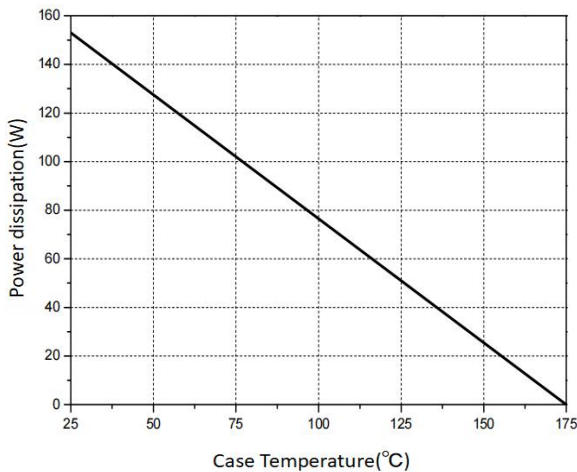
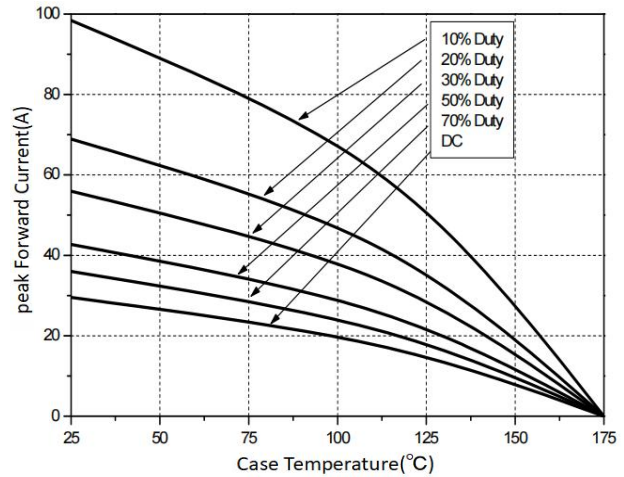
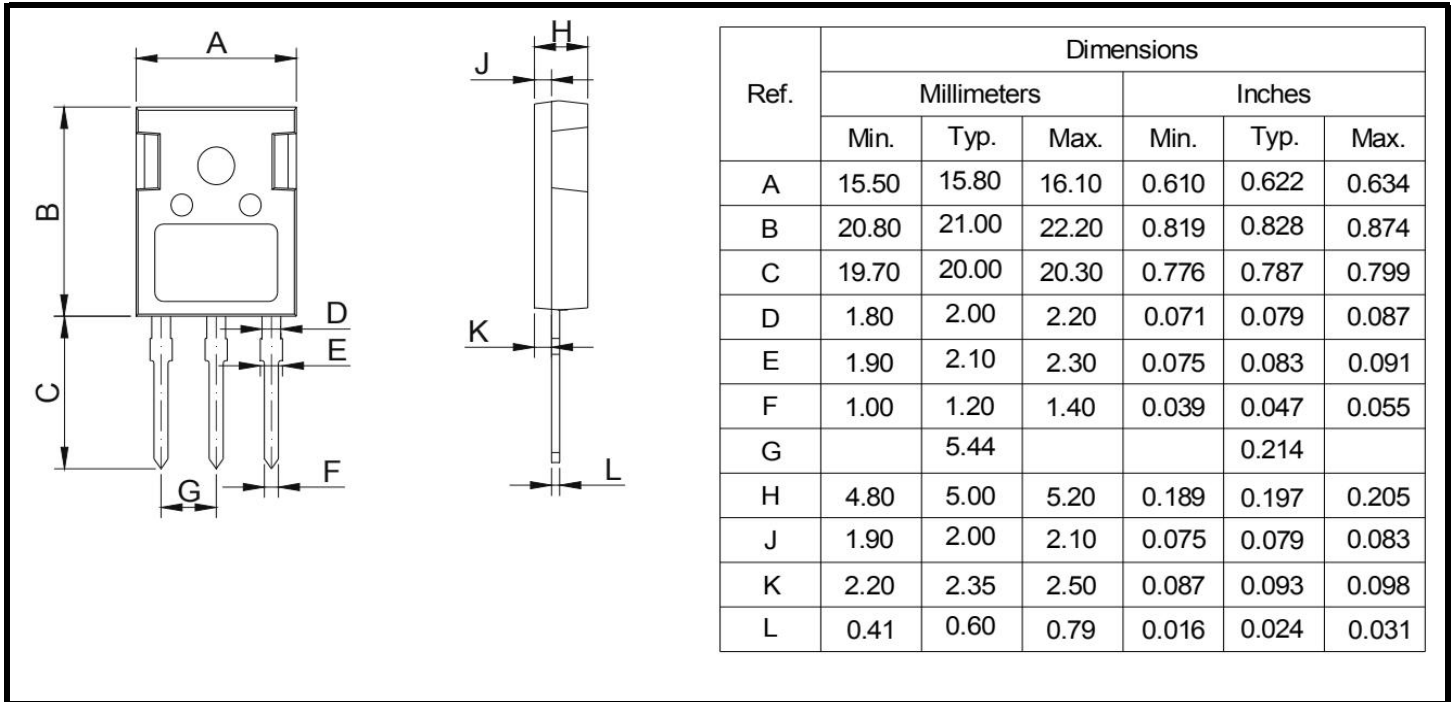


FIG.6: Current Derating



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PACKAGE OUTLINE DIMENSIONS

PACKING INFORMATION

Package	Tube(PCS)	Inner Box(PCS)	Carton(PCS)
TO-247	30	450	2,250