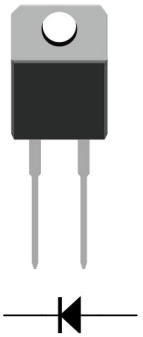
SC08650COI

8A, 650V SIC Schottky Rectifier

FEATURES

- 650V schottky rectifier
- Ceramic package provides 2.5KV isolation
- Zero reverse recovery current
- Zero forward recovery voltage
- Switching characteristics independent on temperature
- Positive temperature coefficient of forward voltage
- High temperature soldering guaranteed: 270℃/10 seconds
- RoHS compliant, halogen free

TO-220AC



RoHS COMPLIANT

HALOGEN FREE

MECHANICAL DATA

- Case: TO-220AC
- Case material: molding compound meets UL 94V-0 flammability rating
- Polarity: as marked on case

TYPICAL APPLICATION

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

MAXIMUM RATINGS

T_J=25℃ unless otherwise noted

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	650	V
Average Forward Rectified Current	I_F	8	A
Repetitive Peak Forward Surge Current (tp=10ms,T_C=25℃)	I_{FRM}	65	A
Peak Forward Surge Current (tp=10ms,T_C=25℃)	I_{FSM}	80	A
Non-Repetitive peak forward surge current (tp = 10 us; T_C = 25 °C, pulse)	I_{Fmax}	500	A
Power Dissipation T_C=25℃ T_C=110℃	P_{tot}	 117 51	W
Operating Junction Temperature Range	T_J	-55 to +175	℃
Storage Temperature Range	T_{STG}	-55 to +175	℃

ELECTRICAL CHARACTERISTICS

T_J=25℃ unless otherwise noted

Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@I_F=8A	T_J=25℃	V_F	1.35	1.65	V
	T_J=175℃		1.85	2.35	
Reverse Current @ V_{RRM}	T_J=25℃	I_R	5	20	μA
	T_J=175℃		30	80	
Total Capacitance	V_R=0V,f=1MHz	C	470	-	pF
	V_R=200V,f=1MHz		40	-	
	V_R=400V,f=1MHz		32	-	
Total Capacitance Charge	V_R=400V	Q_C	30	-	nC
Capacitance Stored Energy	V_R=400V	E_C	6	-	μJ
Thermal Resistance	Junction to case	$R_{\theta JC}$	2.1		℃/W

RATINGS AND CHARACTERISTIC CURVES

FIG.1: Forward Characteristics

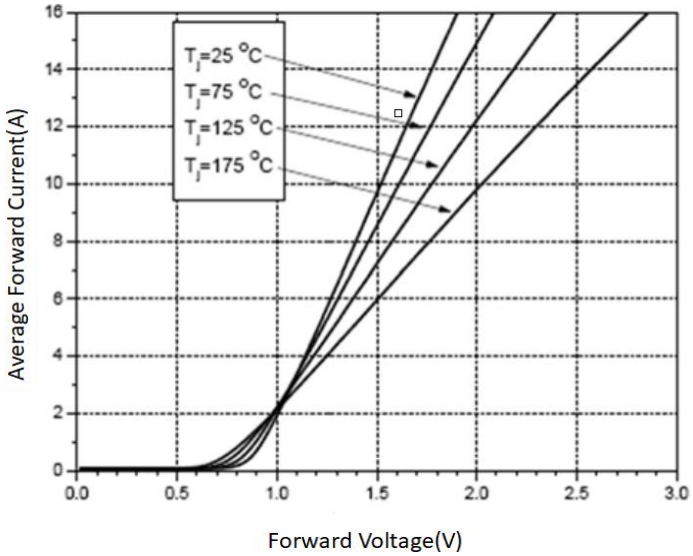


FIG.2: Reverse Characteristics

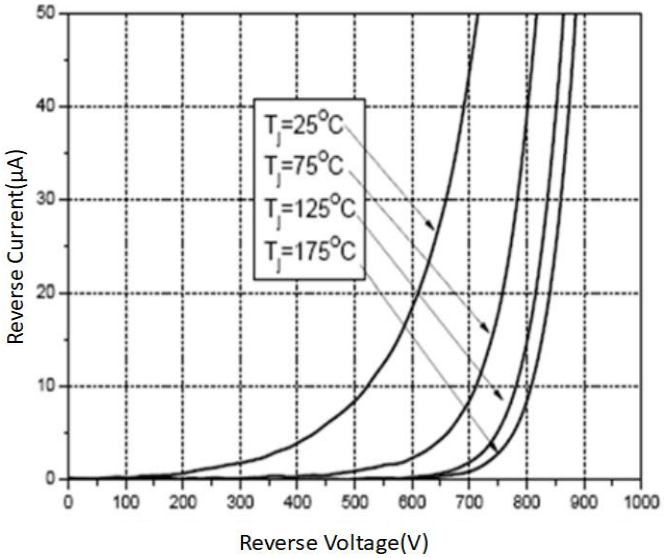


FIG.3: Capacitance Charge vs. Reverse Voltage

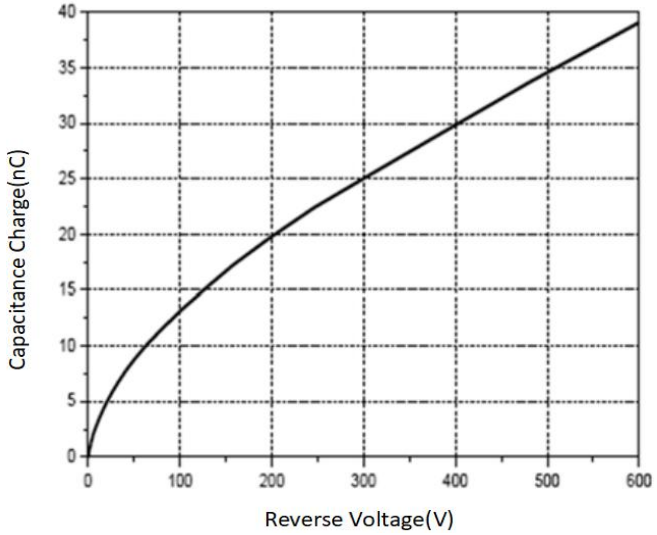


FIG.4: Capacitance Stored Energy

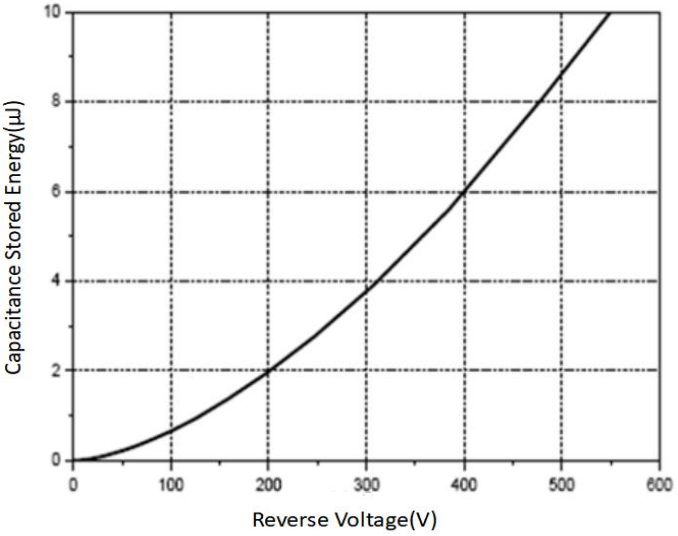


FIG.5: Power Derating

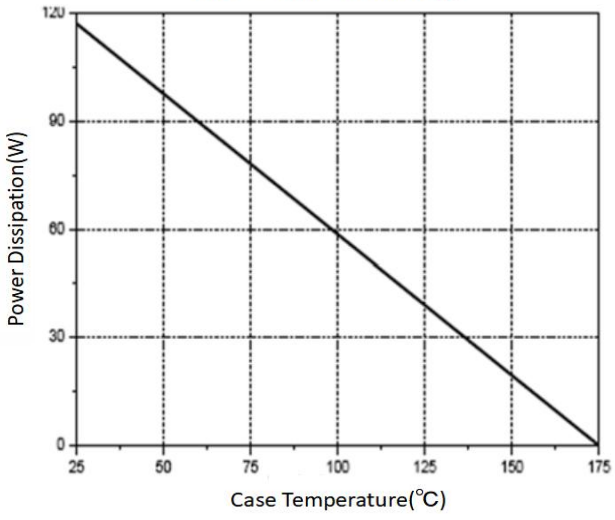
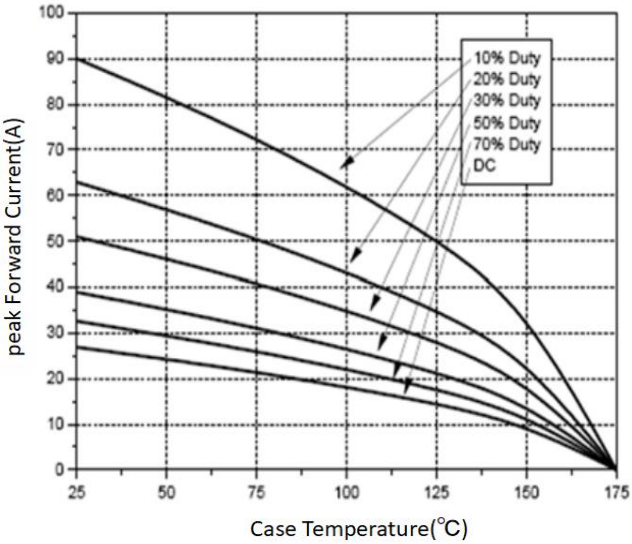


FIG.6: Current Derating



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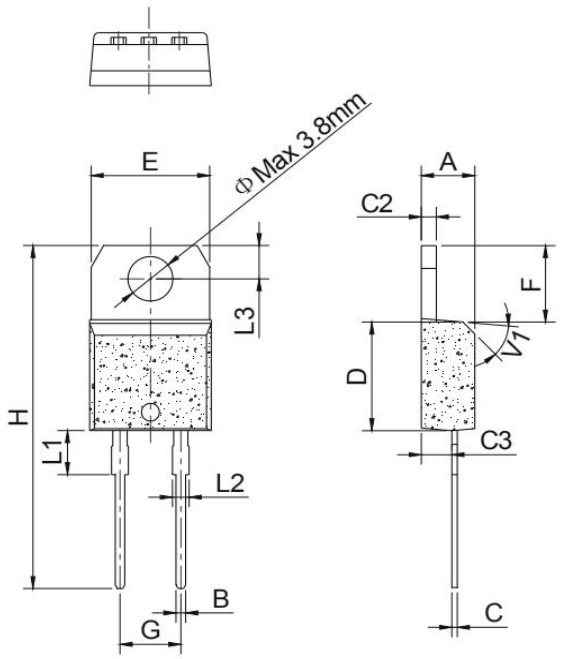
PACKAGE OUTLINE DIMENSIONS



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G		5.08			0.2	
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	

PACKING INFORMATION

Package	Tube(PCS)	Inner Box(PCS)	Carton(PCS)
TO-220AC	50	1,000	5,000