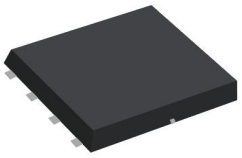
SC02650Q

2A, 650V SIC Schottky Rectifier

FEATURES

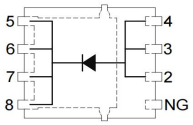
- 650V schottky rectifier
- Zero reverse recovery current
- Zero forward recovery voltage
- High frequency operation
- Switching characteristics independent on temperature
- Positive temperature coefficient of forward voltage
- RoHS compliant
- Halogen free

DFN3*3



RoHS COMPLIANT

HALOGEN FREE



MECHANICAL DATA

- Case: DFN3*3
- Case material: molding compound meets UL 94V-0 flammability rating

TYPICAL APPLICATION

General purpose use in HAVC,SMPS, UPS,AC/DC converters,free wheeling diodes in inverter stages, power factor correction, PC Silverbox, LED/OLED TV, motor drives.

MAXIMUM RATINGS

T_J=25℃ unless otherwise noted

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	650	V
Average Forward Rectified Current(T_C=150℃)	I_F	2	A
Repetitive Peak Forward Surge Current (tp=10ms,T_C=25℃)	I_{FRM}	14	A
Peak Forward Surge Current (tp = 10 ms; T_C = 25 °C)	I_{FSM}	16	A
Non-Repetitive peak forward surge current (tp = 10 us; T_C = 25 °C, pulse)	I_{Fmax}	80	A
Power Dissipation T_C=25℃ T_C=110℃	P_{tot}	 46 20	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=2A	T_J=25℃	V_F	1.4	1.8	V
	T_J=175℃		1.8	2.0	
Reverse Current @ V_{RRM}	T_J=25℃	I_R	2	20	μA
	T_J=175℃		12	100	
Total Capacitance	V_R=0V,f=1MHz	C	93	-	pF
	V_R=200V,f=1MHz		9.5	-	
	V_R=400V,f=1MHz		8.3	-	
Total Capacitance Charge	V_R=400V,T_J=25℃	Q_C	4.8	-	nC
Capacitance Stored Energy	V_R=400V	E_C	1.2	-	μJ
Thermal Resistance	Junction to case	$R_{\theta JC}$	1.8		℃/W

RATINGS AND CHARACTERISTIC CURVES

FIG.1: Forward Characteristics

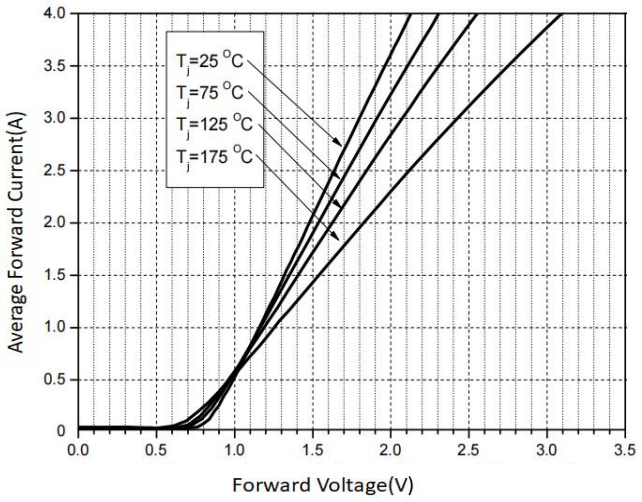


FIG.2: Capacitance Charge vs. Reverse Voltage

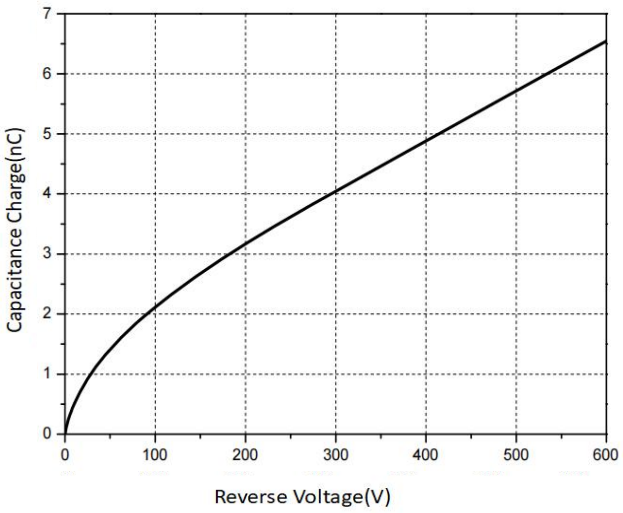


FIG.3: Reverse Characteristics

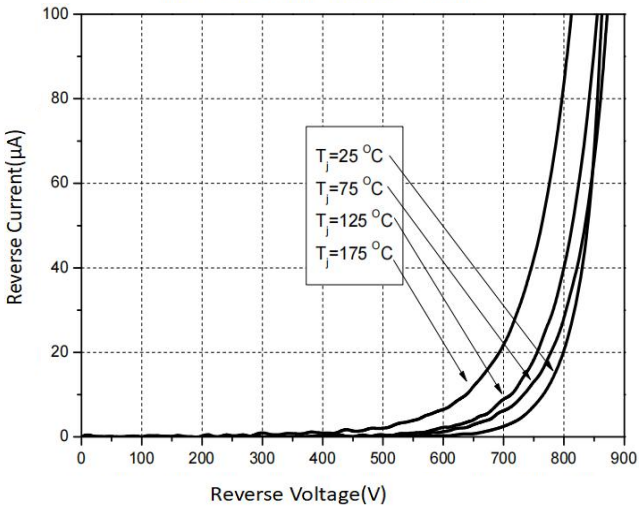


FIG.4: Capacitance Stored Energy

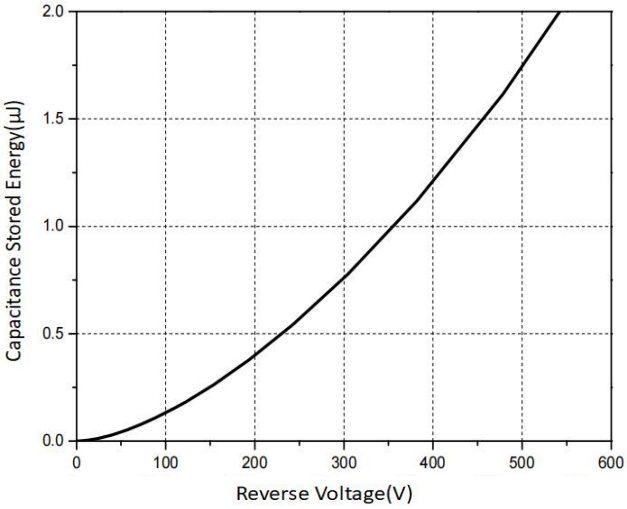


FIG.5: Total Power Derating

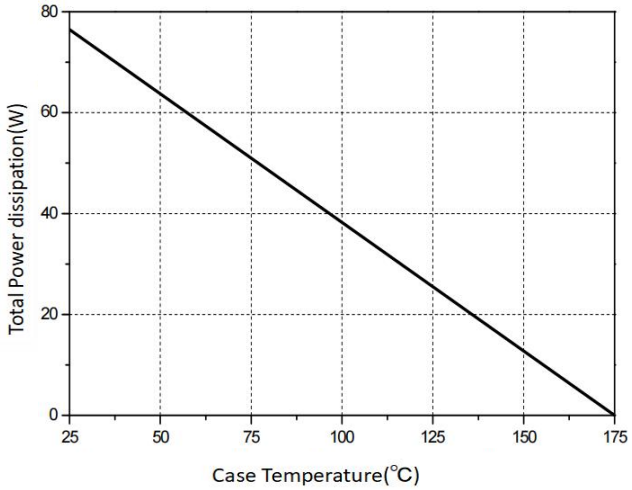
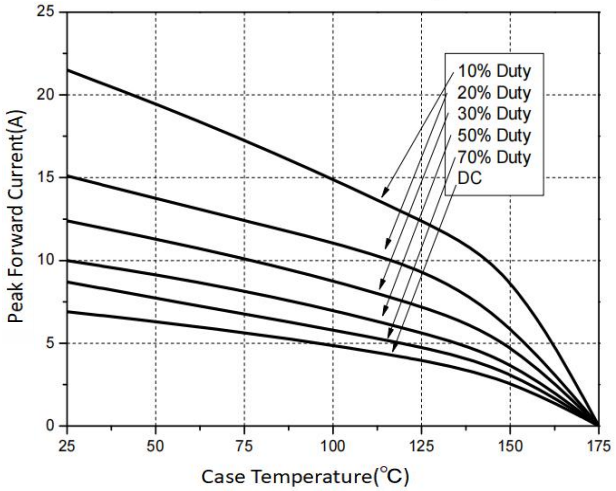
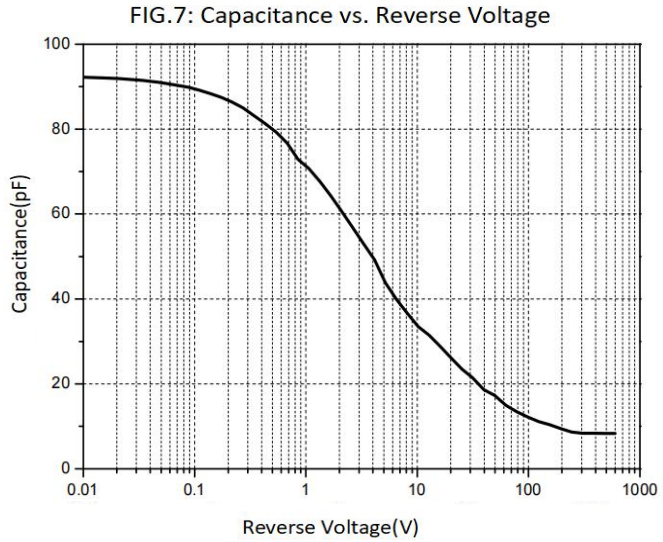


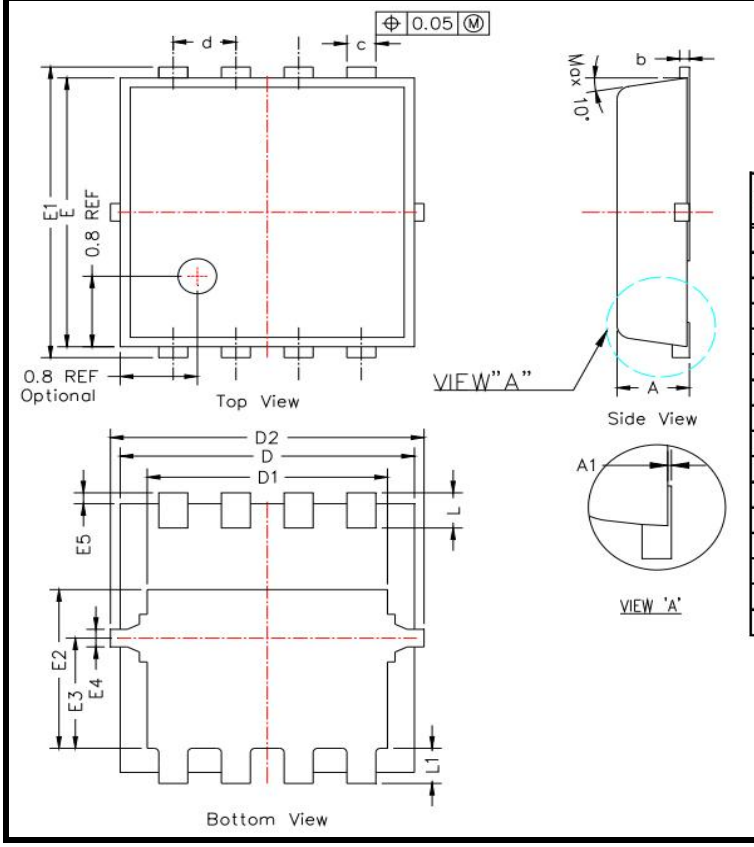
FIG.6: Current Derating



RATINGS AND CHARACTERISTIC CURVES



PACKAGE OUTLINE DIMENSIONS



SYMBOLS	DIMENSION IN MM			DIMENSION IN INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.700	0.750	0.800	0.028	0.030	0.031
A1	---	---	0.050	#VALUE!	----	0.002
b	0.144	0.152	0.202	0.006	0.006	0.008
c	0.250	0.300	0.350	0.010	0.012	0.014
d	0.65 BSC			0.026 BSC		
D	2.950	3.050	3.150	0.116	0.120	0.124
D1	2.390	2.490	2.590	0.094	0.098	0.102
D2	3.200	3.300	3.400	0.126	0.130	0.134
E	2.950	3.050	3.150	0.116	0.120	0.124
E1	3.200	3.300	3.400	0.126	0.130	0.134
E2	1.700	1.800	1.900	0.067	0.071	0.075
E3	1.150	1.250	1.350	0.045	0.049	0.053
E4	0.150	0.200	0.250	0.006	0.008	0.010
E5	0.075	0.125	0.175	0.003	0.005	0.007
L	0.300	0.400	0.500	0.01	0.02	0.02
L1	0.300	0.400	0.500	0.01	0.02	0.02

PACKING INFORMATION

Package	Reel(PCS)	Inner Box(PCS)	Carton(PCS)
DFN3*3	5,000	10,000	50,000