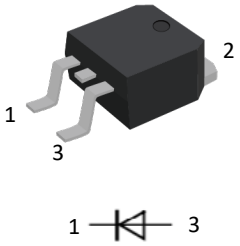
SC04650TA

4A, 650V SIC Schottky Rectifier

FEATURES

- 650V 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: 260℃/10 seconds
- RoHS compliant
- Halogen free

TO-263AB



RoHS COMPLIANT

HALOGEN FREE

MECHANICAL DATA

- Case: TO-263AB
- 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 (T_C=150℃)	I_F	4	A
Repetitive Peak Forward Surge Current (tp=10ms,T_C=25℃)	I_{FRM}	20	A
Peak Forward Surge Current (tp=10ms,T_C=25℃)	I_{FSM}	26	A
Non-Repetitive peak forward surge current (tp = 10 us; T_C = 25 °C, pulse)	I_{Fmax}	200	A
Power Dissipation T_C=25℃ T_C=110℃	P_{tot}	 76.5 33.2	W
Operating Junction Temperature Range	T_J	-55 to +175	℃
Storage Temperature Range	T_{STG}	-55 to +175	℃

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ELECTRICAL CHARACTERISTICS

T_J=25℃ unless otherwise noted

Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@I_F=4A	T_J=25℃	V_F	1.5	1.8	V
	T_J=175℃		1.8	2	
Reverse Current @ V_{RRM}	T_J=25℃	I_R	1	20	μA
	T_J=175℃		12	100	
Total Capacitance	V_R=0V,f=1MHz	C	185	-	pF
	V_R=200V,f=1MHz		19	-	
	V_R=400V,f=1MHz		16.7	-	
Total Capacitance Charge	V_R=400V	Q_C	9.5	-	nC
Capacitance Stored Energy	V_R=400V	E_C	2.4	-	μJ
Thermal Resistance		$R_{\theta JC}$	1.5		℃/W

RATINGS AND CHARACTERISTIC CURVES

FIG.1: Forward characteristics

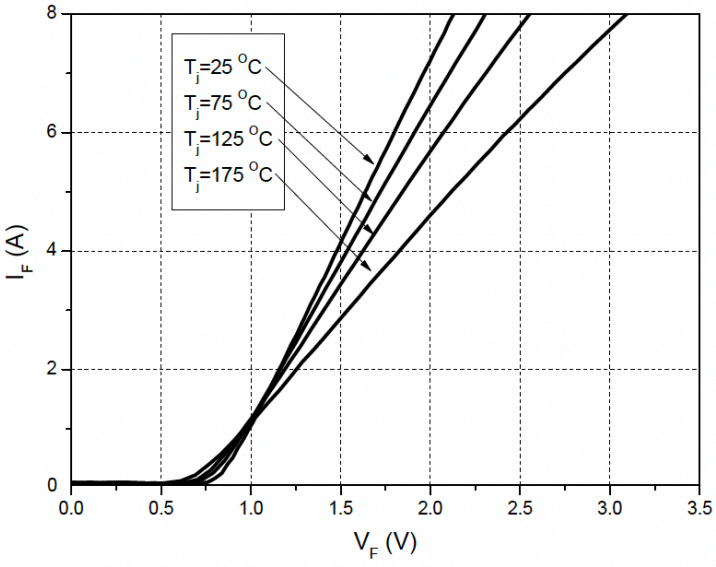
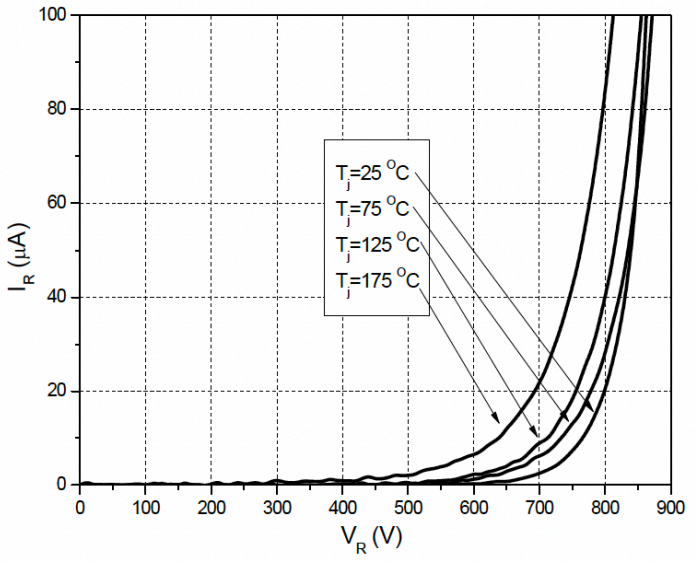


FIG.2: Reverse characteristics



RATINGS AND CHARACTERISTIC CURVES

FIG.3: Capacitance vs. reverse voltage

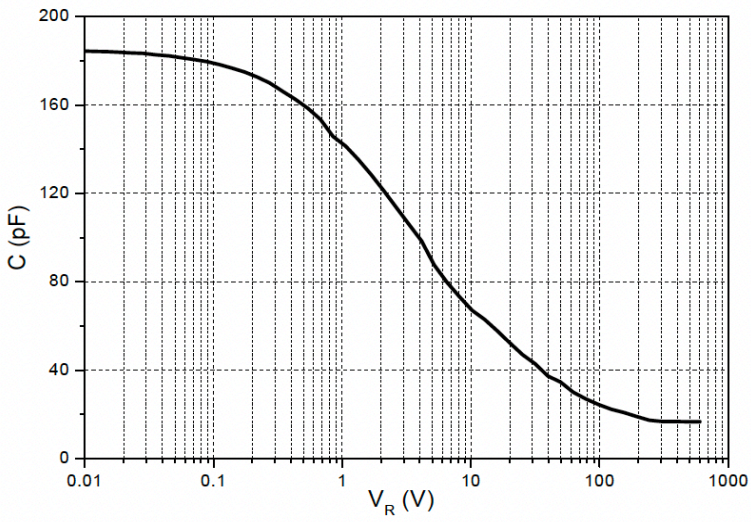


FIG.4: Reverse characteristics

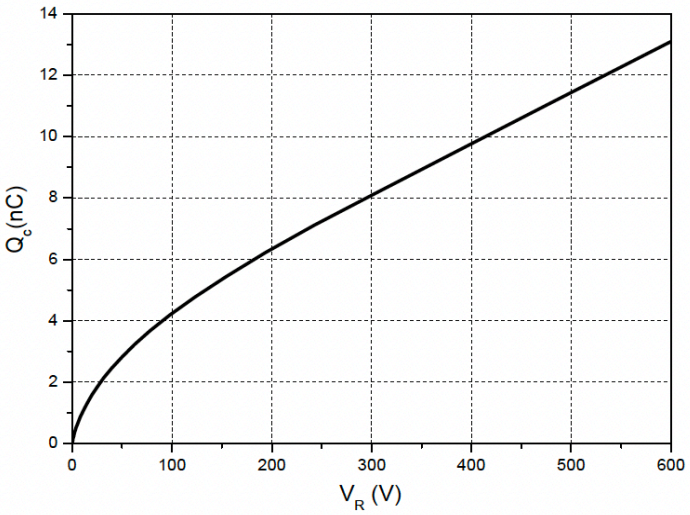


FIG.5: Capacitance stored energy

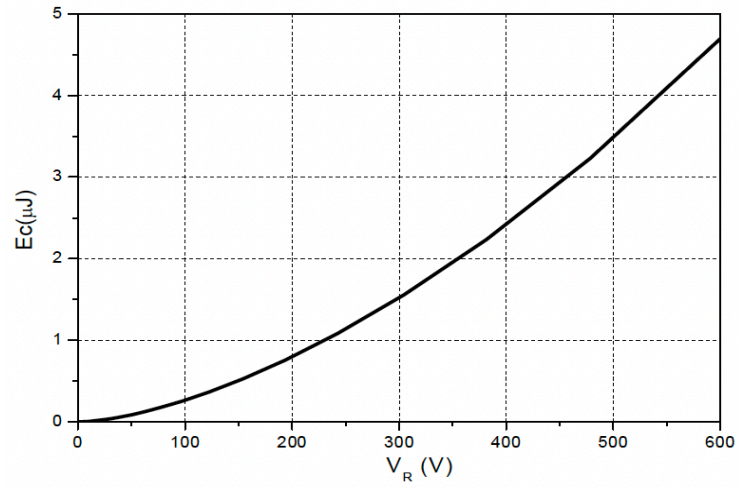


FIG.6: Power derating

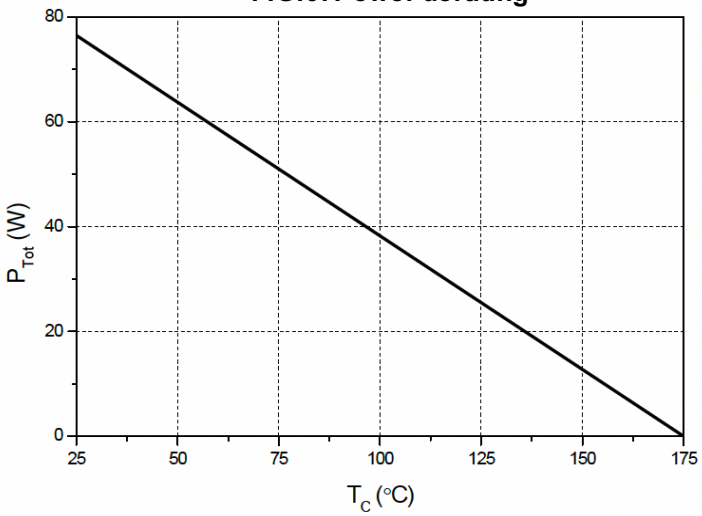
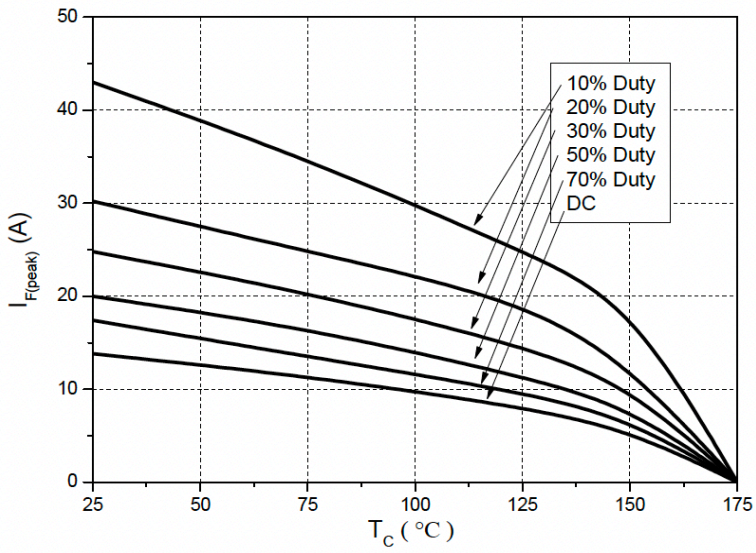


FIG.7: Current derating



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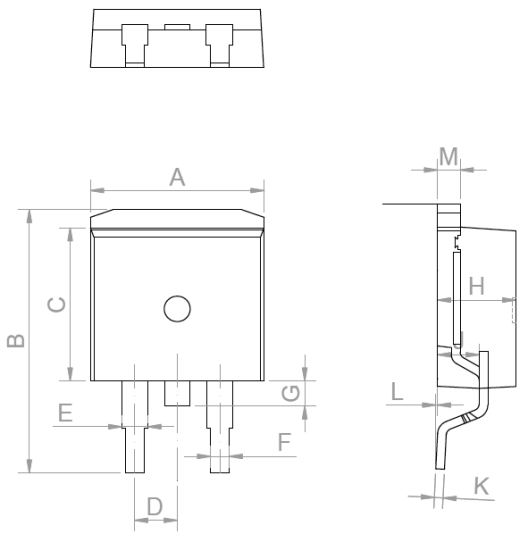
PACKAGE OUTLINE DIMENSIONS



TO-263

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.90		10.20	0.390		0.402
B	14.70		15.80	0.579		0.622
C	8.80		9.60	0.346		0.378
D		2.54			0.100	
E	1.20		1.40	0.047		0.055
F	0.75		0.85	0.030		0.033
G			1.75			0.069
H	4.40		4.70	0.173		0.185
J	2.30		2.70	0.091		0.106
K	0.38		0.55	0.015		0.022
L	0	0.10	0.25	0	0.004	0.010
M	1.17		1.37	0.046		0.054

PACKING INFORMATION

Package	Tube(PCS)	Inner Box(PCS)	Carton(PCS)
TO-263AB	50	1,000	5,000