ANSAS

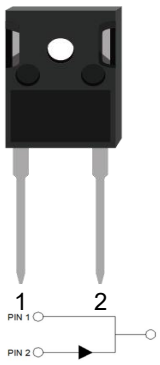
SC30650P

30A, 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
- RoHS compliant
- Halogen free

TO-247-2L



RoHS COMPLIANT

HALOGEN FREE

MECHANICAL DATA

- Case: TO-247-2L
- Case material: molding compound meets UL 94V-0 flammability rating
- Polarity: as marked on case body

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
Cotinuous Forward Current(T_C=150℃)	I_F	30	A
Repetitive Peak Forward Surge Current (tp=10ms,T_C=25℃)	I_{FRM}	200	A
Peak Forward Surge Current tp=10ms,T_C=25℃)	I_{FSM}	240	A
Non-Repetitive peak forward surge current (tp = 10 us; T_C = 25 °C, pulse)	I_{Fmax}	1600	A
Power Dissipation T_C=25℃ T_C=110℃	P_{tot}	 283 123	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=30A	T_J=25℃	V_F	1.45	1.8	V
	T_J=175℃		1.95	2.4	
Reverse Current @ V_{RRM}	T_J=25℃	I_R	2	20	μA
	T_J=175℃		40	200	
Total Capacitance	V_R=0V,f=1MHz	C	2050	-	pF
	V_R=200V,f=1MHz		162	-	
	V_R=400V,f=1MHz		137	-	
Total Capacitance Charge	V_R=400V	Q_C	85	-	nC
Capacitance Stored Energy	V_R=400V	E_C	21	-	μJ
Thermal Resistance		$R_{\theta JC}$	0.53		℃/W

RATINGS AND CHARACTERISTIC CURVES

FIG.1: Forward Characteristics

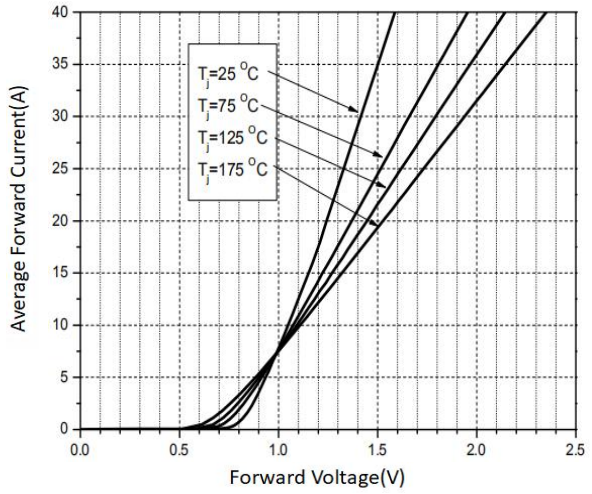


FIG.2: Reverse Characteristics

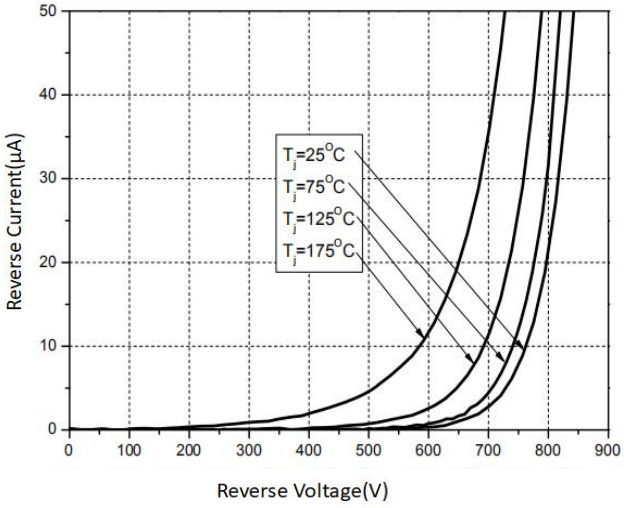


FIG.3: Capacitance Charge vs. Reverse Voltage

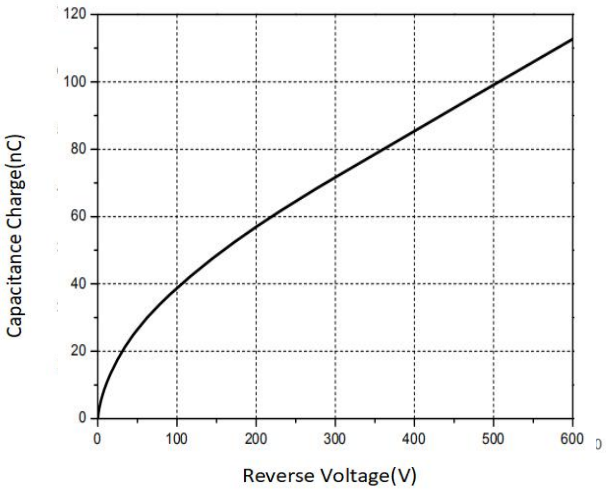


FIG.4: Capacitance Stored Energy

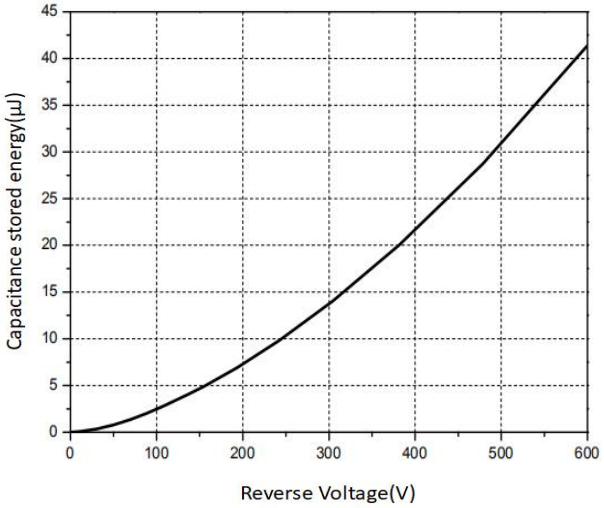


FIG.5: Power Derating

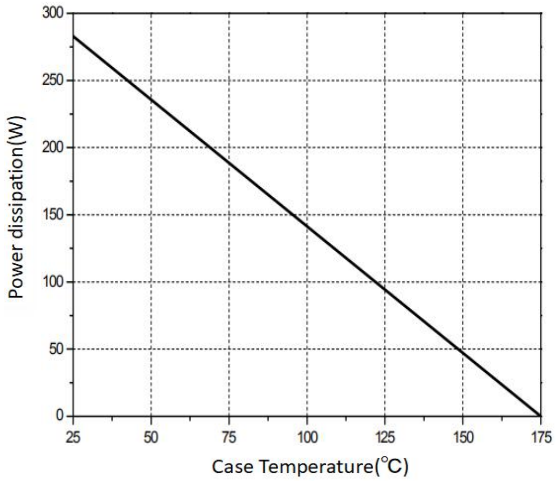
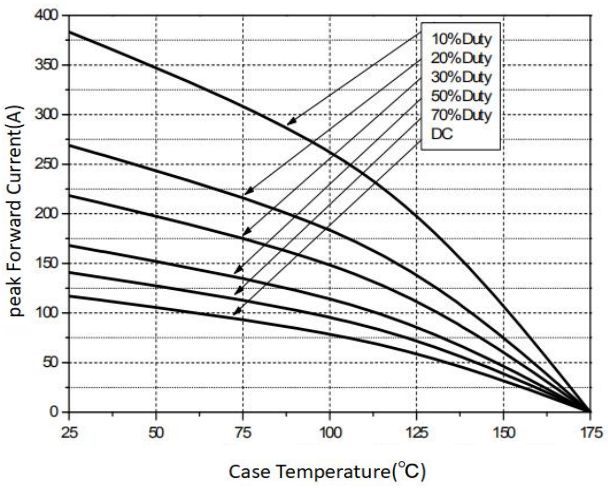
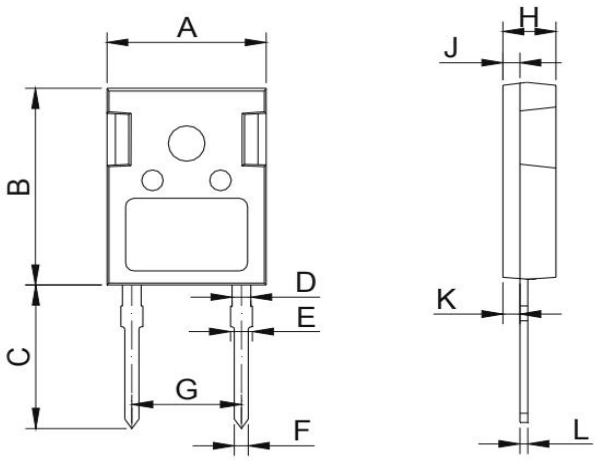


FIG.6: Current Derating



PACKAGE OUTLINE DIMENSIONS



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.50	15.80	16.10	0.610	0.622	0.634
B	20.80	21.00	22.20	0.819	0.828	0.874
C	19.70	20.00	20.30	0.776	0.787	0.799
D	1.80	2.00	2.20	0.071	0.079	0.087
E	1.90	2.10	2.30	0.075	0.083	0.091
F	1.00	1.20	1.40	0.039	0.047	0.055
G		10.88			0.428	
H	4.80	5.00	5.20	0.189	0.197	0.205
J	1.90	2.00	2.10	0.075	0.079	0.083
K	2.20	2.35	2.50	0.087	0.093	0.098
L	0.41	0.60	0.79	0.016	0.024	0.031

PACKING INFORMATION

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