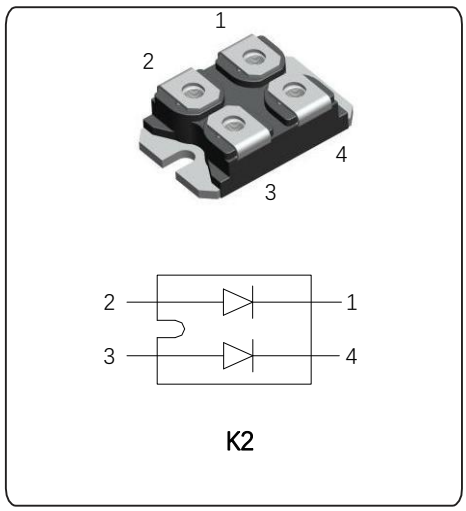
JK2SC100-170

SiC Schottky DiodesModule,2x50A,1700V

FEATURES

- Two fully independent SIC diodes
- Fully insulated package
- High operation junction temperature (175℃ Tj)
- Ultra fast switching
- No Reverse Recovery/No Forward Recovery
- Temperature independent switching behavior
- Positive Temperature Coefficient of V_F
- Easy to use and parallel
- Industry standard outline
- Component in accordance to RoHS 2015/863/EU

SOT-227



MECHANICAL DATA

- Case: SOT-227
- Molding compound meets UL94V-0 flammability rating
- Polarity: As marked

TYPICAL APPLICATIONS

- Solar and wind inverter
- Uninterruptible power supply (UPS)
- Welding equipment
- Switched power supplies
- PFC

ABSOLUTE MAXIMUM RATINGS

Parameters	Symbol	Test conditions	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}		1700	V
Maximum Continuous forward current, per diode	I_F	$T_C \leqslant 130℃$	50	A
Single pulse forward current, per diode	I_{FSM}	$T_C=25℃$, tp=8.3 ms	390	A
RMS isolation voltage	Viso	Any terminal to case,t=1S	2500	V
Maximum junction temperature	T_J		175	℃
Maximum case temperature	Tc		150	℃
Storage temperture	T_{stg}		-55 ~ 150	℃

ELECTRICAL CHARACTERISTICS

Parameters	Symbol	Test conditions	Min	Typ	Max	Units
Cathode to anodebreak down voltage	V_{BR}	I_R=100μA	1700	-	-	V
Forward voltage	V_F	I_F=50A T_J=25℃		1.5	1.7	
		I_F=50A T_J=175℃		2.1	2.7	
Reverse leakage current	I_R	V_R=VRrated T_J=25℃		6	100	uA
		V_R=VRrated T_J=175℃		190	800	
Total Capacitance	C_j	V_R=1V T_J=25℃,f=1MH		4540		pF
		V_R=400V T_J=25℃,f=1MH		320		
		V_R=800V T_J=25℃,f=1MH		230		
Total Capacitive Charge	Q_C	V_R=1200V,T_J=25℃		420		

THERMAL MECHANICAL SPECIFICATIONS

Parameters	Symbol	Test conditions	Min	Typ	Max	Units
Junction to case,single leg conducting	R_{thjc}		-	-	0.52	℃/W
Junction to case,both leg conducting			-	-	0.26	
Case to heatsink	R_{thcs}	Flat,greased surface		0.075		
Weight				30		g
Mounting torque				1.3		Nm
Case style			SOT-227			

ORDERING INFORMATION TABEL

Device code

J	K2	SC	100	-	170
①	②	③	④		⑤

① JH 's power module

② Circuit configuration (2 separate diodes,parallel pin-out)

③ SiC Diodes

④ Maximum average forward current (100A=2X50A)

⑤ Voltage rating(170=1700V)

Figure 1. Forward Characteristics

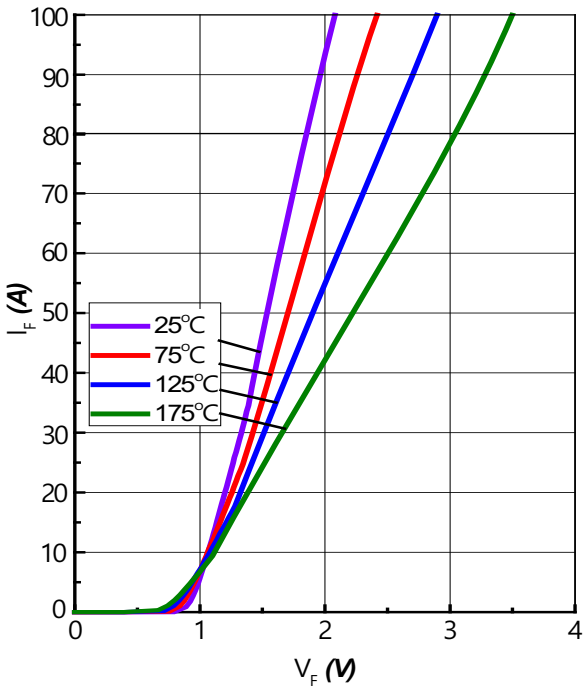


Figure 2. Reverse Characteristics

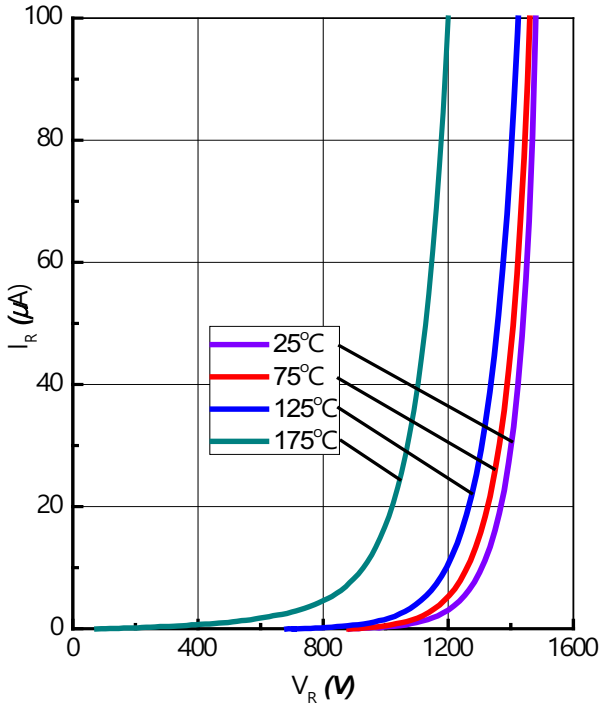


Figure3. Total Capacitance vs. Reverse Voltage

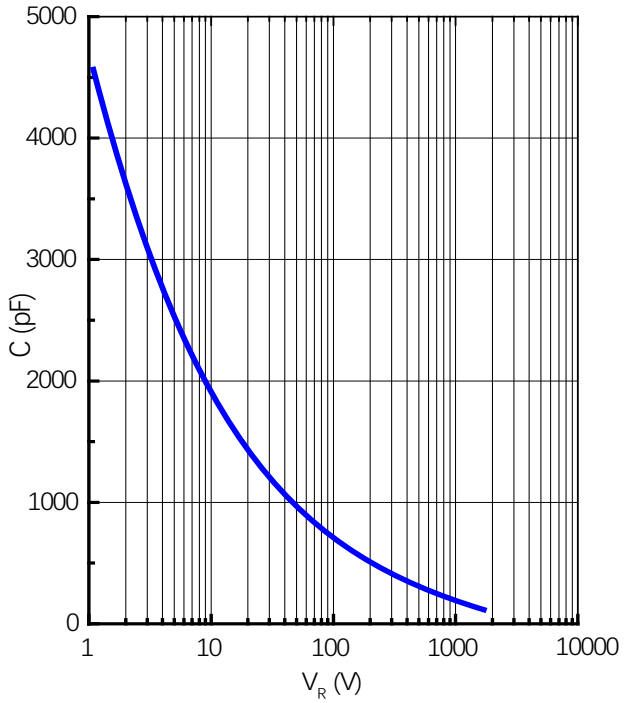
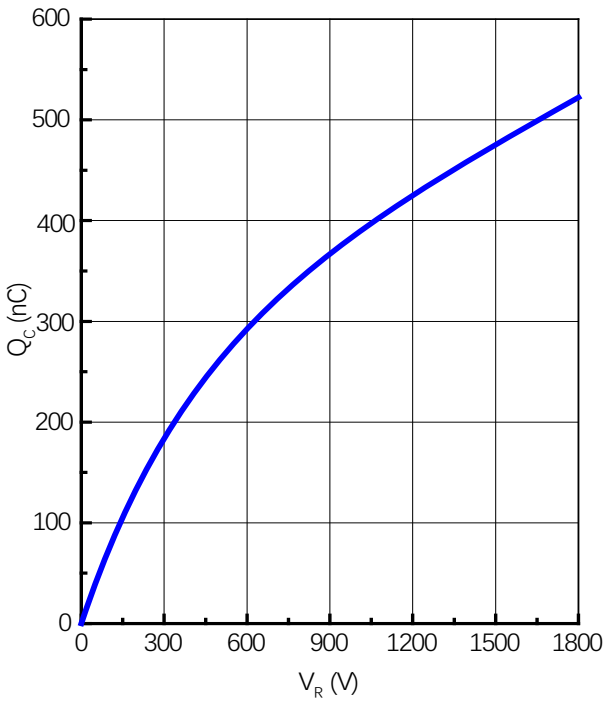
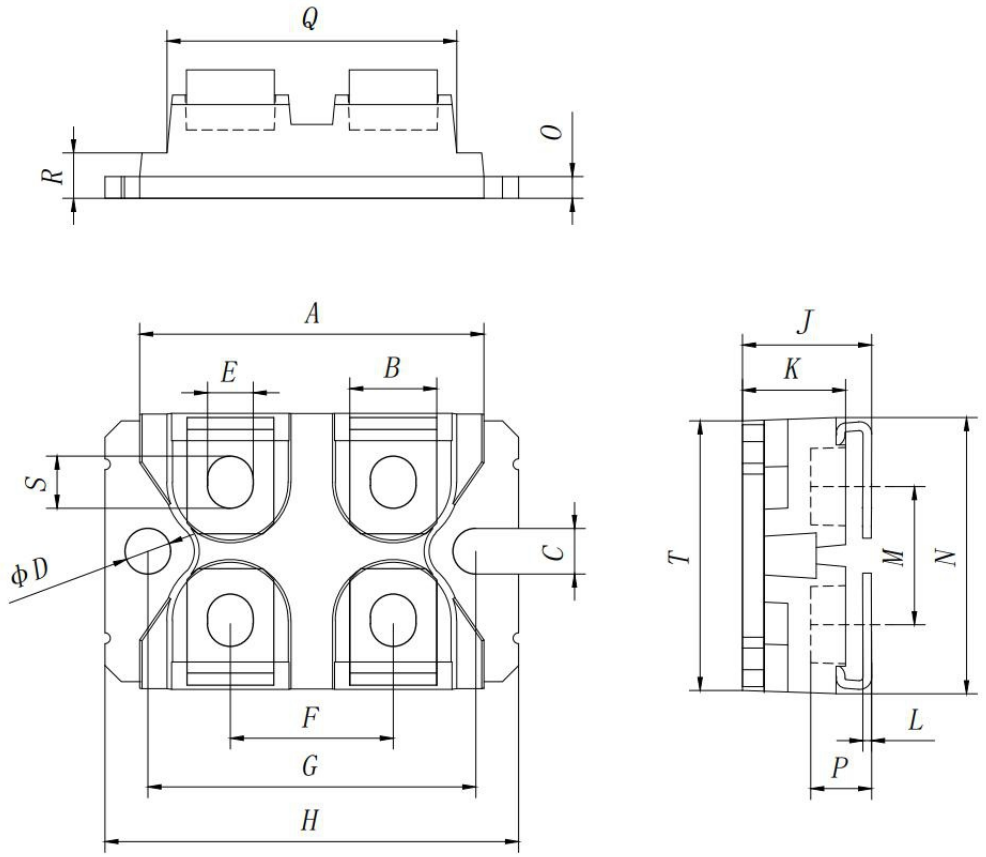


Figure4. Total CapacitiveCharge vs. Reverse Voltage



SOT-227package



SYMBOLS	DIMENSION IN MM		
	MIN	NOM	MAX
A	31.20	31.70	32.20
B	7.50	8.00	8.50
C	3.80	4.20	4.60
D	3.80	4.20	4.60
E	3.80	4.20	4.60
F	14.50	15.00	15.50
G	29.80	30.20	30.60
H	37.70	38.10	38.50
J	11.50	11.90	12.30
K	8.90	9.50	10.00
L	0.75	0.80	0.85
M	12.40	12.70	13.00
N	25.00	25.40	25.80
O	1.70	2.00	2.30
P	4.95	5.60	6.10
Q	26.40	26.70	27.00
R	3.90	4.18	4.45
S	4.20	4.80	5.40
T	23.80	24.80	25.80

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