SEMICONDUCTOR

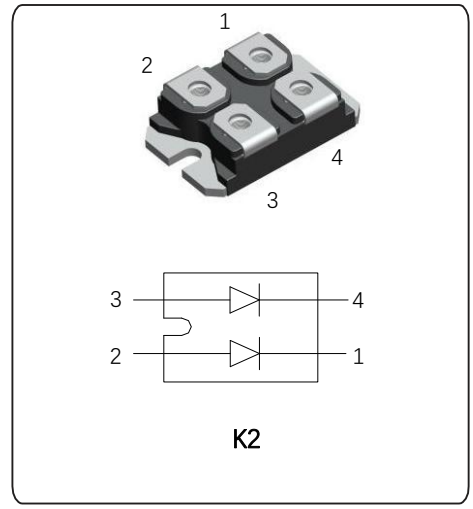
JK2U160-40

Ultrafast Rectifier DiodesModule,2x80A,400V

FEATURES

- International standard package SOT-227
- Fast switching for high efficiency
- Low forward voltage drop
- Single rectifier construction
- High surge capability
- 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

- Antiparallel diode for high frequency switching devices
- Antisaturation diode
- Snubber diode
- Free wheeling diode
- Rectifiers in switch mode power supplies (SMPS)
- Uninterruptible power supplies (UPS)

ABSOLUTE MAXIMUM RATINGS

Parameters	Symbol	Test conditions	Value	Unit
Maximum repetitive peak reverse voltage	VRRM		400	V
Maximum Continuous forward current, per pkg per diode	IF	Tc=100℃	160 80	A
Single pulse forward current, per diode	IFSM	Tj=25℃,t=8.3ms,half Sine Wave	600	A
RMS isolation voltage	Viso	AC,t=1min	2500	V
Maximum junction temperature	TJ		150	℃
Maximum reverse recovery time	Trr	IF=0.5A,IR=1A,IRR=0.25A	45	nS
Storage temperture	Tstg		-40 ~ 150	℃
Power Dissipation	PD		208	W

ELECTRICAL CHARACTERISTICS

Parameters	Symbol	Test conditions	Min	Typ	Max	Units
Cathode to anodebreak down voltage	V_{BR}	I_R=100μA	400	-	-	V
Forward voltage	V_F	I_F=80A,T_J=25℃	-	-	1.45	
		I_F=80A,T_J=125℃	-	-	1.35	
Reverse leakage current	I_R	V_R=VRrated T_J=25℃	-	-	5	uA
		V_R=VRrated T_J=150℃	-	-	0.5	mA

THERMAL MECHANICAL SPECIFICATIONS

Parameters	Symbol	Test conditions	Min	Typ	Max	Units
Junction to case,single leg conducting	R_{thjc}		-	-	0.60	℃/W
Junction to case,both leg conducting			-	-	0.30	
Case to heatsink	R_{thcs}	Flat,greased surface		0.10		
Weight				30		g
Mounting torque				1.3		Nm
Case style			SOT-227			

ORDERING INFORMATION TABEL

Device code

J	K2	U	160	-	40
①	②	③	④		⑤

① JH 's power module

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

③ Ultrafast Rectifier Diodes

④ Maximum Average Forward Current (2×80A)

⑤ Voltage Rating(40=400V)

FIG.1-TYPRCAL FORWARD CURRENT DERATING CURVE

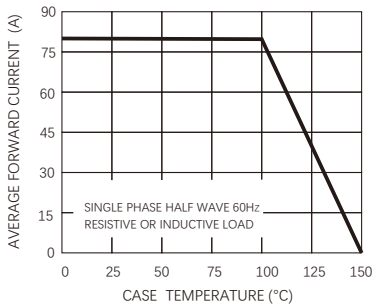


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

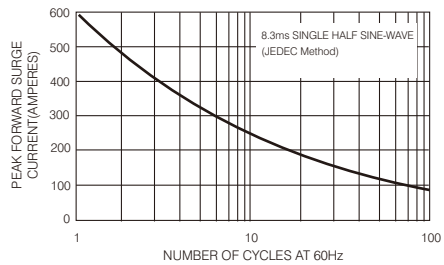


FIG4-TYPICAL FORWARD CHARACTERISTICS

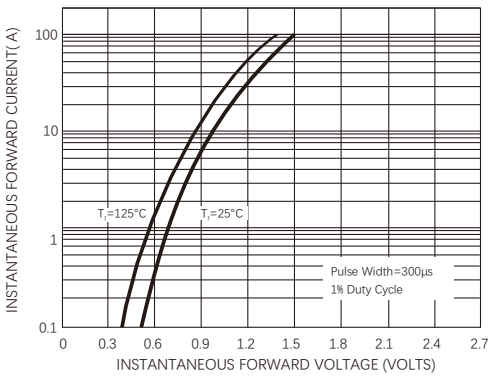
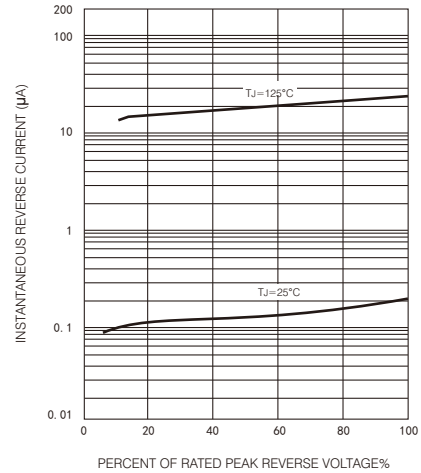
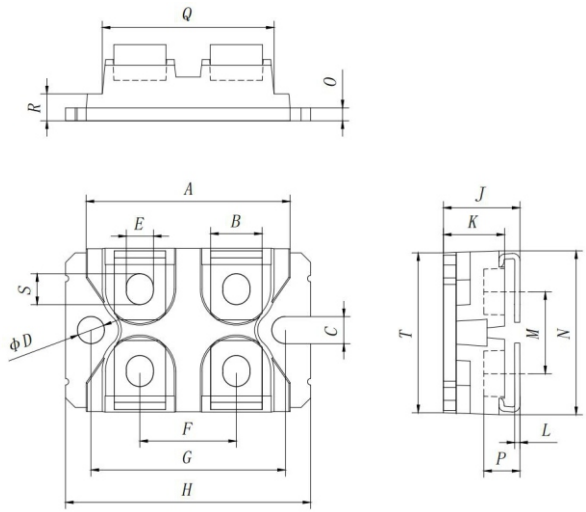


FIG.5-TYPICAL REVERSE CHARACTERISTICS





SYMBOLS	DIMENSION 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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