

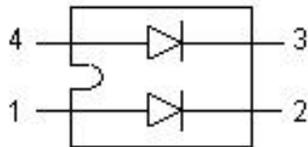
SK2U200-400 Ultrafast Recovery Modules



Features

- Two fully independent diodes
- Fully insulated package
- Ultrafast, soft reverse recovery, with high operation junction temperature (175°C T_j)
- Low forward voltage drop
- Optimized for power conversion: welding and industrial SMPS applications
- Easy to use and parallel
- Industry standard outline
- Designed and qualified for industrial level
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Cathode to anode voltage	V _R	-	400	V
Continuous forward current per diode	I _{F(1)}	50% duty cycle @T _C = 90°C, rectangular wave form	120	A
Single pulse forward current per diode	I _{FSM}	8.3 ms, half Sine pulse, T _C =25°C	600	A
RMS isolation voltage	V _{ISol}	Any terminal to case, t=1 minute	2500	V
Maximum power dissipation per module	P _D	T _C =90°C	311	W

Note: (1) Maximum continuous forward current must be limited to 100A to do not exceed the maximum temperature of power terminations.

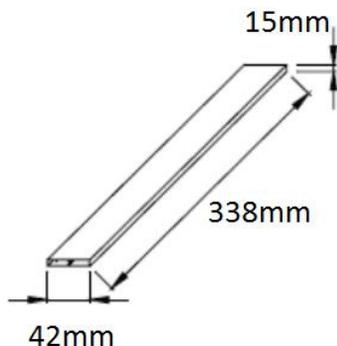
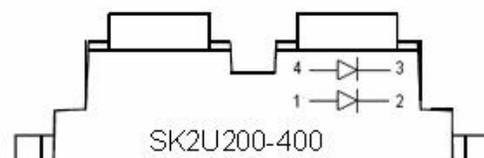
Electrical Characteristics:

Characteristics	Symbol	Condition	Min.	Typ.	Max.	Units
Cathode to anode breakdown voltage	V_{BR}	@ $I_R = 100\mu A$	400	-	-	V
Forward Voltage Drop (per leg) *	V_{F1}	@ 100A, Pulse, $T_J = 25^\circ C$	-	1.08	1.15	V
	V_{F2}	@ 100A, Pulse, $T_J = 125^\circ C$	-	0.92	1.0	V
Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R, T_J = 25^\circ C$	-	0.03	50	μA
	I_{R2}	@ $V_R = \text{rated } V_R, T_J = 125^\circ C$	-	0.06	2	mA
Reverse recovery time	T_{rr}	$I_F = 500mA, I_R = 1A, \text{ and } I_m = 250mA$	-	120	150	nS

* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	$^\circ C$
Storage Temperature	T_{stg}	-	-55 to +175	$^\circ C$
Maximum Thermal Resistance Junction to Case(per leg)	$R_{\theta JC}$	DC operation	0.56	$^\circ C/W$
Maximum Thermal Resistance Junction to Case(per package)	$R_{\theta JC}$	DC operation	0.28	$^\circ C/W$
Typical Case to heatsink	$R_{\theta JS}$	Flat, greased surface	0.075	$^\circ C/W$
Typical Mounting Torque	T_M	-	1.3	Nm
Typical Approximate Weight	wt	-	30	g

Tube Specification

Marking Diagram


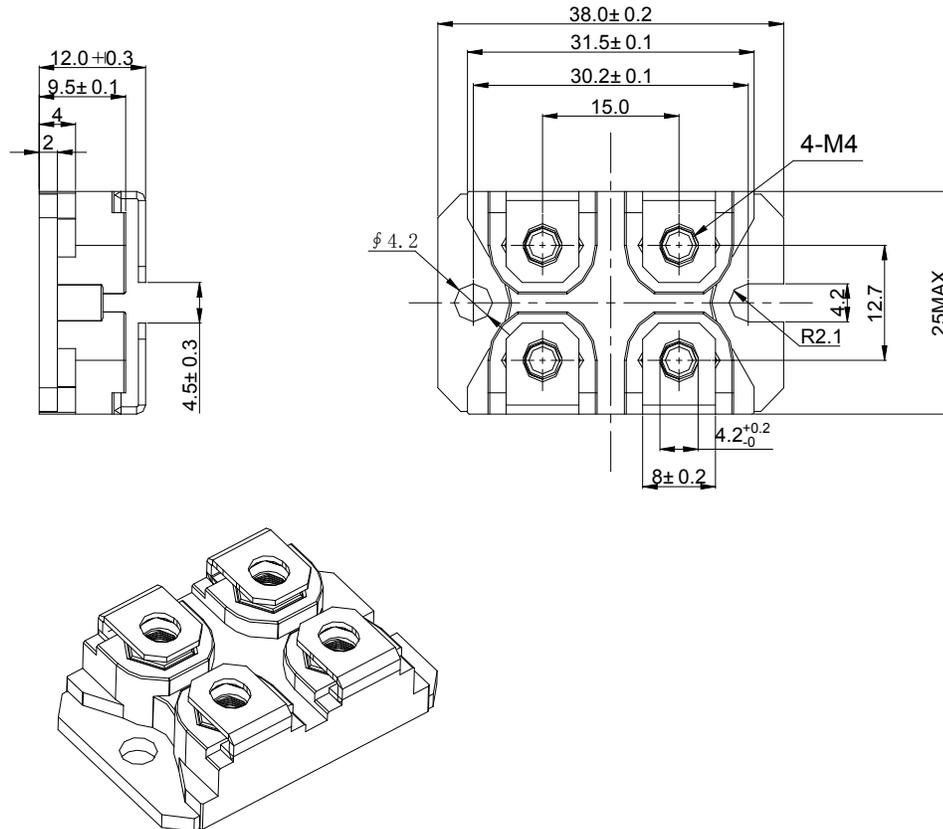
S = SMC's Power Module
 K = SOT-227 Package
 2 = Circuit Configuration
 U = Ultrafast Rectifier
 200 = Forward Current (200A)
 400 = Reverse Voltage (400V)

Ordering Information

Device	Package	Shipping
SK2U200-400	SOT-227 (Pb-Free)	10pcs / tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Mechanical Dimensions SOT-227(Millimeters)



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