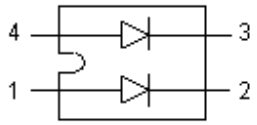
SK2U200-400

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SK2U200-400 Ultrafast Recovery Modules

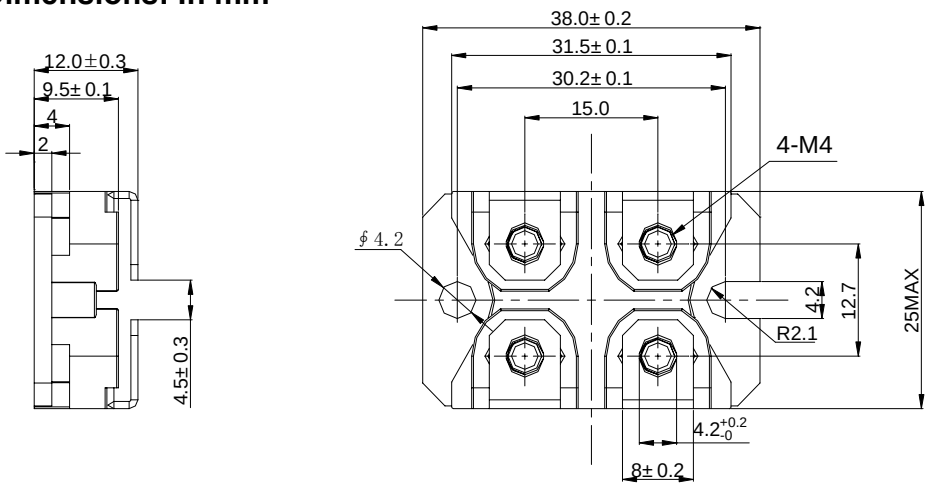
Features:

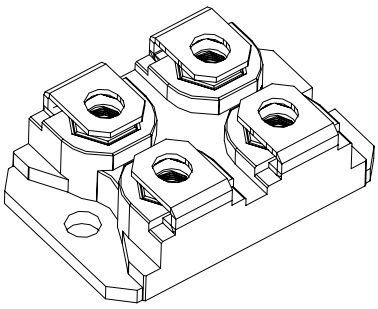
- **Two fully independent diodes**
- **Fully insulated package**
- **Ultrafast, soft reverse recovery, with high operation junction temperature (175℃ Tj)**
- **Lo forward voltage drop**
- **Optimized for power conversion: welding and industrial SMPS applications**
- **Easy to use and parallel**
- **Industry 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**





Mechanical Dimensions: In mm





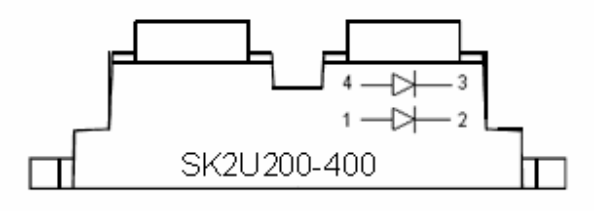
SOT-227

SK2U200-400

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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)

Cautions: Molding resin
Epoxy resin UL:94V-0

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.

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℃	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℃	311	W

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

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Electrical Characteristics:

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

* Pulse Width < 300μs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	°C
Storage Temperature	T_{stg}	-	-55 to +175	°C
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	0.56	°C/W
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.28	°C/W
Typical Case to heatsink	$R_{\theta JS}$	Flat, greased surface	0.075	°C/W
Typical Mounting Torque	T_M	-	1.3	Nm
Typical Approximate Weight	wt	-	30	g
Case Style	SOT-227			

SK2U200-400

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