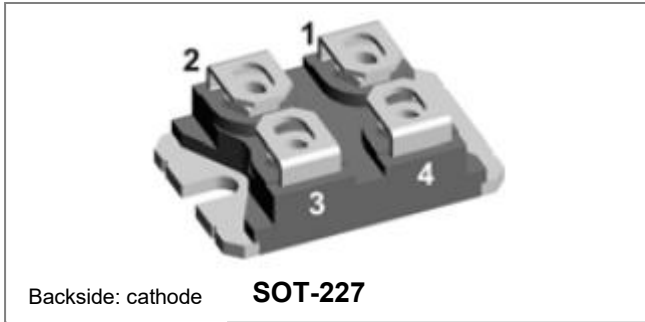


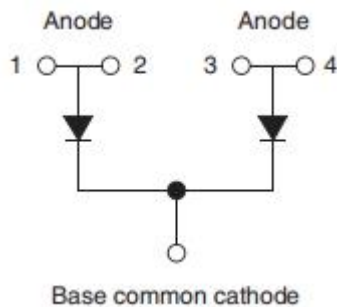
## SKMU300-400 Power Module Ultrafast Rectifier



### Features

- Non Isolated package
- Ultrafast reverse recovery
- Ultrasoft reverse recovery current shape
- Optimized for power conversion: welding and industrial SMPS applications
- Compatible with industry SOT-227 packages
- Easy to assemble
- Direct mounting to heatsink
- 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 module	$I_F$	50% duty cycle @ $T_C = 119^\circ\text{C}$ , rectangular wave form	300	A
Single pulse forward current per diode	$I_{FSM}$	10 ms, half Sine pulse, $T_C = 25^\circ\text{C}$	1300	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (per leg) *	V <sub>F1</sub>	@ 150A, Pulse, T <sub>J</sub> = 25 °C	1.35	V
	V <sub>F2</sub>	@ 150A, Pulse, T <sub>J</sub> = 125 °C	1.20	V
Reverse Current (per leg) *	I <sub>R1</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 25 °C	200	μA
	I <sub>R2</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 125 °C	1000	μA
Reverse recovery time	T <sub>rr</sub>	I <sub>F</sub> =500mA, I <sub>R</sub> =1A, and I <sub>m</sub> =250mA	100	nS

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

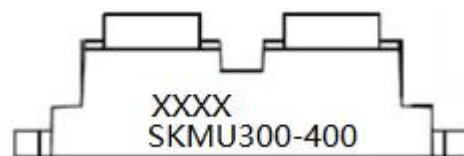
**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T <sub>J</sub>	-	-55 to +150	°C
Storage Temperature	T <sub>stg</sub>	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case(per leg)	R <sub>θJC</sub>	DC operation	0.19	°C/W
Maximum Thermal Resistance Junction to Case(per package)	R <sub>θJC</sub>	DC operation	0.095	°C/W
Typical Case to heatsink	R <sub>θJS</sub>	Flat, greased surface	0.07	°C/W
Typical Mounting Torque	T <sub>M</sub>	-	1.3	Nm
Typical Approximate Weight	wt	-	30	g

**Ordering Information**

Device	Package	Shipping
SKMU300-400	SOT-227 (Pb-Free)	36pcs /BULK

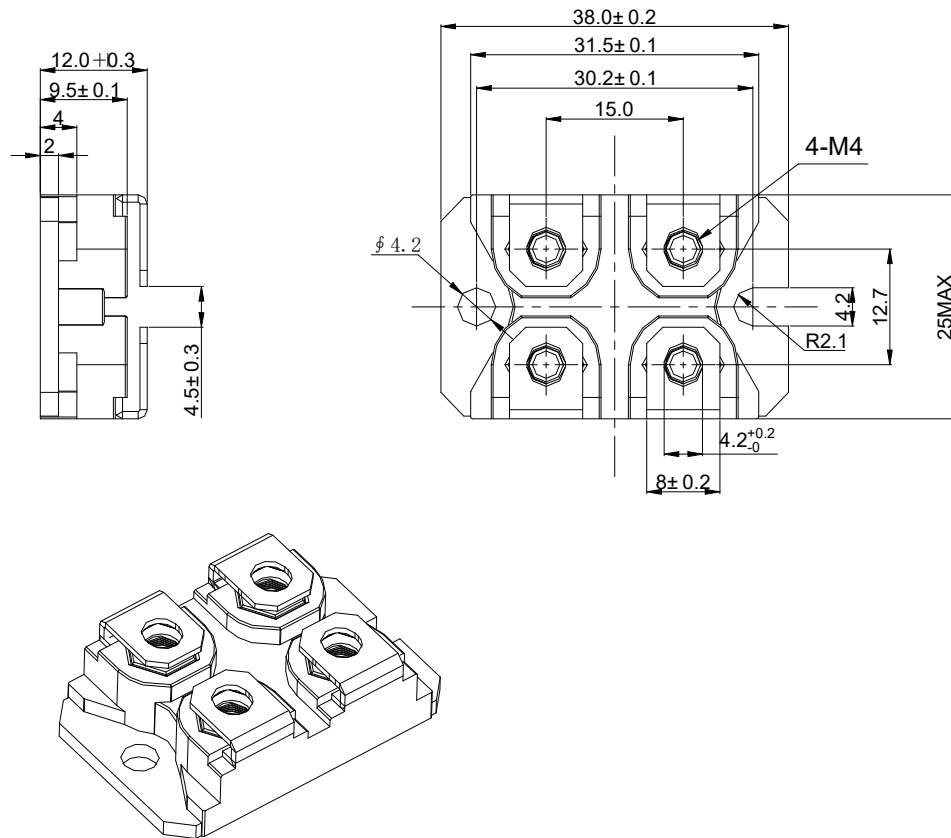
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**


Where XXXX is YYWW

S	= SMC's Power Module
K	= SOT-227 Package
M	= Circuit Configuration
U	= Ultrafast Rectifier
300	= Forward Current (300A)
400	= Reverse Voltage (400V)
YY	= Year
WW	= Week

**Mechanical Dimensions SOT-227(Millimeters)**



**DISCLAIMER:**

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