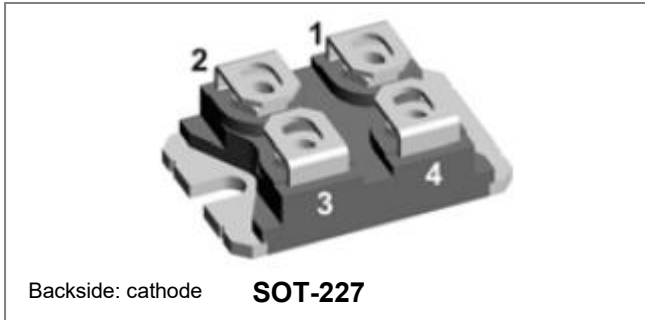


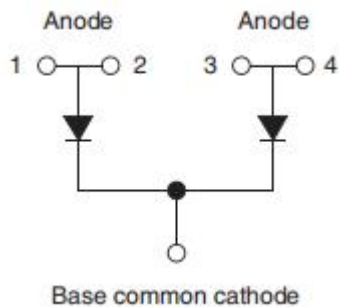
SKMU300-600 Power Module Ultrafast Rectifier



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	-	600	V
Continuous forward current per module	I_F	50% duty cycle @ $T_C = 135^\circ\text{C}$, rectangular wave form	300	A
Single pulse forward current per diode	I_{FSM}	10 ms, half Sine pulse, $T_C = 25^\circ\text{C}$	1080	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (per leg) *	V _{F1}	@ 100A, Pulse, T _J = 25 °C	1.70	V
		@ 150A, Pulse, T _J = 25 °C	1.85	
	V _{F2}	@ 100A, Pulse, T _J = 25 °C	1.65	V
		@ 150A, Pulse, T _J = 125 °C	1.75	
Reverse Current (per leg) *	I _{R1}	@V _R = rated V _R , T _J = 25 °C	200	μA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	1000	μA
Reverse recovery time	T _{rr}	I _F =500mA, I _R =1A, and I _{lm} =250mA	100	nS

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

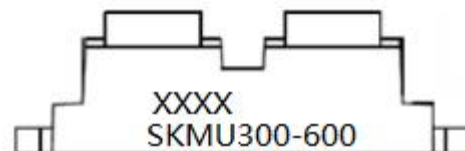
Thermal-Mechanical Specifications:

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

Ordering Information

Device	Package	Shipping
SKMU300-600	SOT-227 (Pb-Free)	36pcs /BULK

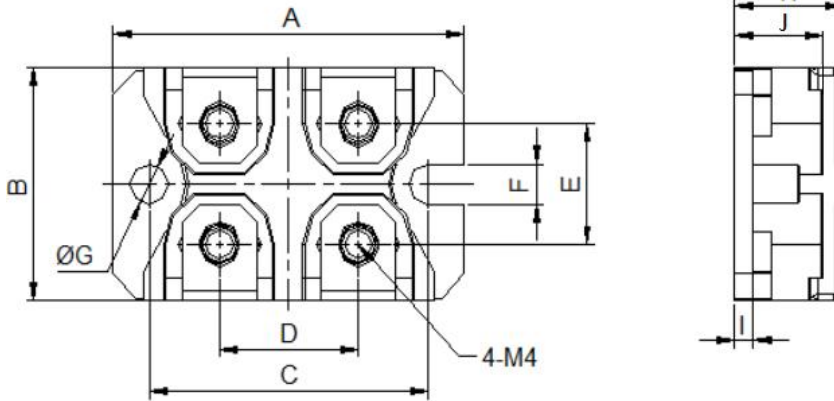
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

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)
 600 = Reverse Voltage (600V)
 YY = Year
 WW = Week

Mechanical Dimensions SOT-227(Millimeters)



SYMBOL	Dimensions in millimeters	
	Min.	Max.
A	37.80	38.20
B	25.00	26.00
C	29.90	30.50
D	14.50	15.50
E	12.20	13.20
F	4.10	4.50
G	φ4.1	φ4.5
H	11.00	12.00
I	1.90	2.10
J	9.00	10.00

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