

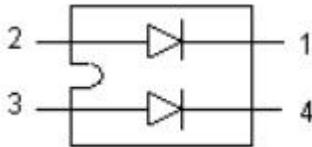
SK2U200-600 Ultrafast Recovery Modules



Features

- Two fully independent diodes
- Fully insulated package
- Ultrafast, soft reverse recovery, with high operation
- 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

Circuit Diagram



Maximum Ratings (limiting values, $T_c = 25^\circ\text{C}$ unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Cathode to anode voltage	V_R	-	600	V
Continuous forward current per diode	I_F	$T_c = 80^\circ\text{C}$	200	A
Single pulse forward current per diode	I_{FSM}	8.3 ms, half Sine pulse, $T_c = 25^\circ\text{C}$	1200	A
Maximum power dissipation per module	P_D	$T_c = 90^\circ\text{C}$	250	W
Isolation Voltage	V_{ISOL}	Ac.50Hz, R.M.S; 1min, $T_j = 25^\circ\text{C}$	2500	V
		Ac.50Hz, R.M.S; 1sec, $T_j = 25^\circ\text{C}$	3500	

Electrical Characteristics:

Characteristics	Symbol	Condition	Min.	Typ.	Max.	Units
Cathode to anode breakdown voltage*	V_{BR}	@ $I_R = 100\mu A$, $T_J = 25^\circ C$	600	-	-	V
Forward Voltage Drop*	V_{F1}	@ 100A, Pulse, $T_J = 25^\circ C$	-	1.44	1.50	V
	V_{F2}	@ 100A, Pulse, $T_J = 125^\circ C$	-	1.24	1.30	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ C$	-	0.01	10	A
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ C$	-	0.03	1	mA
Reverse Recovery Time	t_{rr}	$I_F = 500mA$, $I_R = 1A$, and $I_{rm} = 250mA$, $T_J = 25^\circ C$	-	64	80	nS

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^\circ C$
Storage Temperature	T_{stg}	-	-55 to +150	$^\circ C$
Maximum Thermal Resistance Junction to Case(per leg)	$R_{\theta JC}$	DC operation	0.50	$^\circ C/W$
Maximum Thermal Resistance Junction to Case(per package)	$R_{\theta JC}$	DC operation	0.25	$^\circ C/W$
Typical Mounting Torque	T_M	-	1.3	Nm
Typical Approximate Weight	wt	-	30	g
Case Style	SOT-227			

Ratings and Characteristics Curves

Figure 1
Typical Forward Characteristics

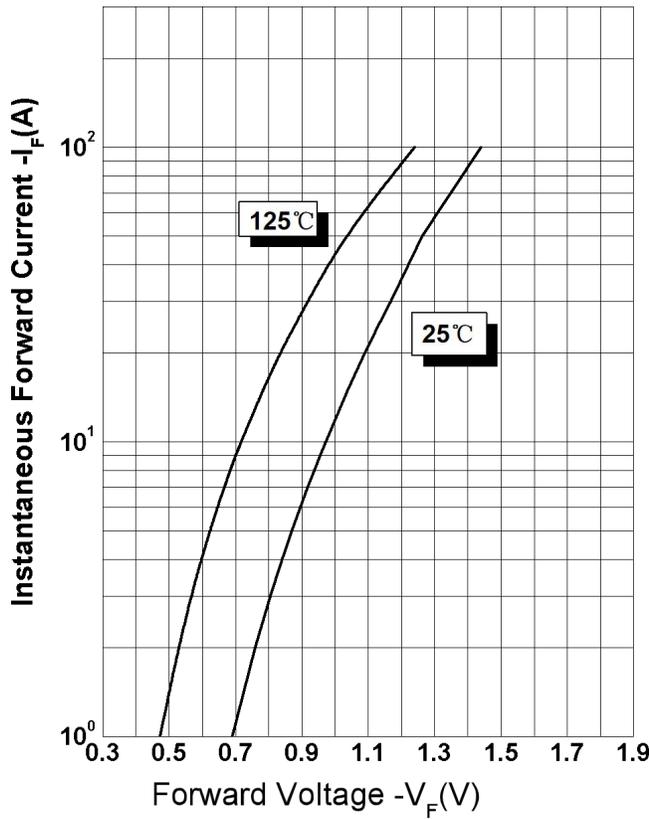


Figure 2
Typical Reverse Characteristics

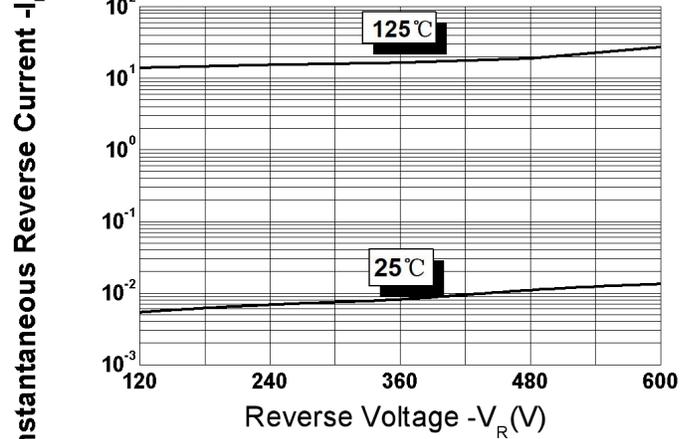
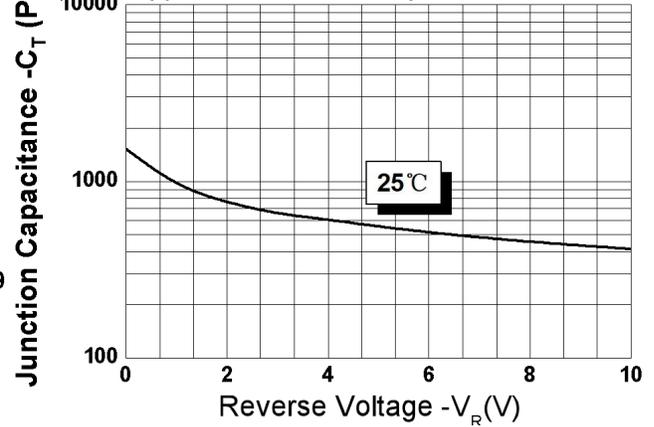


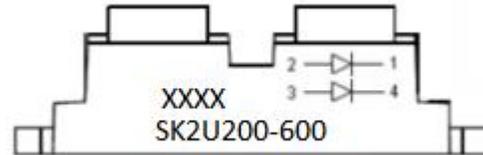
Figure 3
Typical Junction Capacitance



Ordering Information

Device	Package	Shipping
SK2U200-600	SOT-227 (Pb-Free)	36pcs /BULK

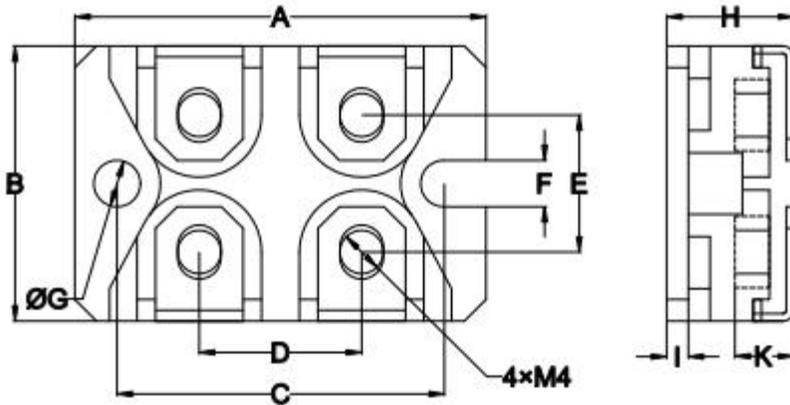
Marking Diagram



Where XXXX is YYWW

- S = SMC's Power Module
- K = SOT-227 Package
- 2 = Circuit Configuration
- U = Ultrafast Rectifier
- 200 = Forward Current (200A)
- 600 = Reverse Voltage (600V)
- YY = Year
- WW = Week

Mechanical Dimensions SOT-227(Millimeters)



SYMBOL	Dimensions in millimeters	
	Min.	Max.
A	37.8	38.2
B	24.8	25.21
C	29.9	30.55
D	14.5	15.5
E	12.2	13.45
F	4.1	4.31
G	Φ4.1	Φ4.31
H	11	12.5
I	1.9	2.1
K	4.3	6.5

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