

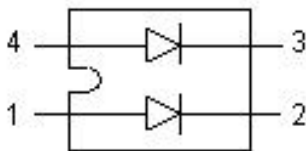
## SK2S160-100 Power Schottky Rectifier



### Features

- International standard package SOT-227
- Very low VF
- Extremely low switching losses
- Low  $I_{RM}$  -values
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Applications

- Rectifiers in switch mode power Supplies(SMPS)
- Insulated package( $V_{ISO}=2500V_{RMS}$ )
- Free wheeling diode in low voltage Converters

### Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	-	100	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 105^\circ C$ , rectangular wave form	80(Per Leg) 160(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current (Per Leg)	$I_{FSM}$	8.3 ms, half Sine pulse	1000	A
Non-Repetitive Avalanche Energy(Per Leg)	$E_{AS}$	$T_J = 25^\circ C$ , $I_{AS} = 12A$ , $L = 180\mu H$ non repetitive	16	mJ
Total Power Dissipation	$P_{tot}$	$T_C = 25^\circ C$	150	W
Repetitive Avalanche Current (Per Leg)	$I_{AR}$	Current decaying linearly to zero in 1 $\mu sec$ Frequency limited by $T_J$ max. $V_A = 1.5 \times V_R$ typical	1.2	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V <sub>F1</sub>	@ 80A, Pulse, T <sub>J</sub> = 25 °C	-	0.80	V
	V <sub>F2</sub>	@ 80A, Pulse, T <sub>J</sub> = 125 °C @ 160A, Pulse, T <sub>J</sub> = 125 °C	-	0.70 0.95	V
Reverse Current(Per Leg)*	I <sub>R1</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 25 °C	-	2	mA
	I <sub>R2</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 125 °C	-	20	mA
Voltage Rate of Change	dv/dt	-	-	5000	V/μs

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

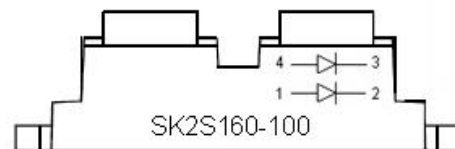
**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T <sub>J</sub>	-	-40 to +150	°C
Storage Temperature	T <sub>stg</sub>	-	-40 to +150	°C
Typical Thermal Resistance Junction to Case(Per Leg)	R <sub>θJC</sub>	DC operation	0.9	°C/W
Thermal Resistance Junction to Case(Peg Device)	R <sub>θJC</sub>	DC operation	0.5	°C/W
Mounting torque(M4)	M <sub>D</sub>	-	1.1-1.5/9-13	Nm/
Terminal connection torque(M4)			1.1-1.5/9-13	lb.in.
Typical Approximate Weight	wt	-	30	g

**Ordering Information**

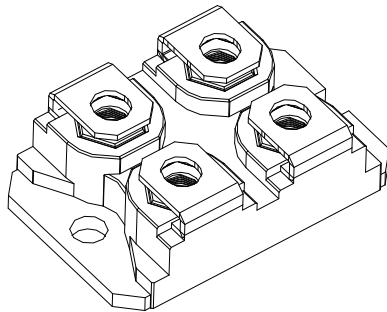
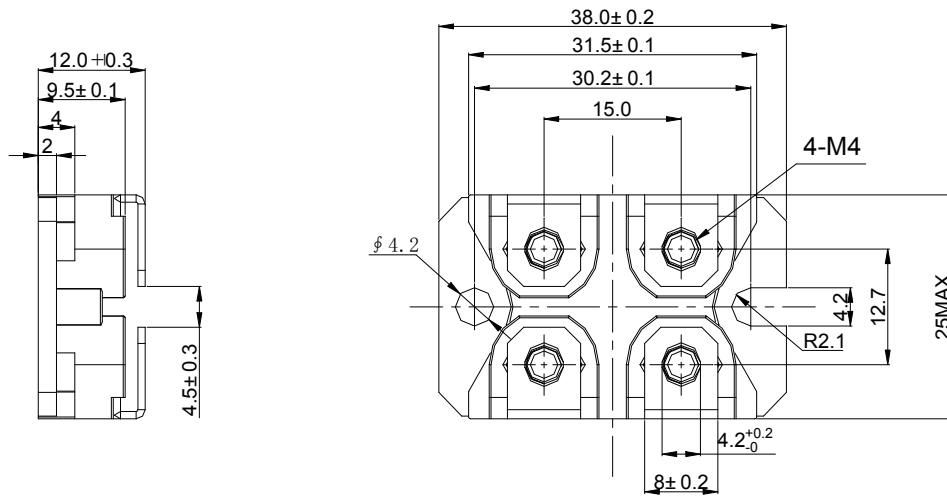
Device	Package	Shipping
SK2S160-100	SOT-227 (Pb-Free)	36pcs /BULK

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

**Marking Diagram**


S = SMC's Power Module  
 K = SOT-227 Package  
 2 = Circuit Configuration  
 S = Schottky Rectifier  
 160 = Forward Current (160A)  
 100 = Reverse Voltage (100V)

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



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