



**THE DATASHEET OF
SK2S160-100**



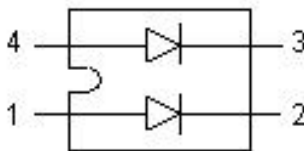
SK2S160-100 Power Schottky Rectifier



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 μsec 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 _{F1}	@ 80A, Pulse, T _J = 25 °C	-	0.80	V
	V _{F2}	@ 80A, Pulse, T _J = 125 °C @ 160A, Pulse, T _J = 125 °C	-	0.70 0.95	V
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	-	2	mA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	-	20	mA
Voltage Rate of Change	dv/dt	-	-	5000	V/μs

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

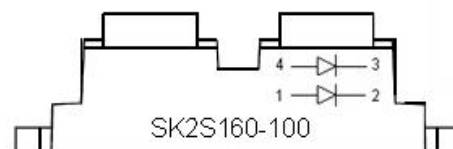
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T _J	-	-40 to +150	°C
Storage Temperature	T _{stg}	-	-40 to +150	°C
Typical Thermal Resistance Junction to Case(Per Leg)	R _{θJC}	DC operation	0.9	°C/W
Thermal Resistance Junction to Case(Peg Device)	R _{θJC}	DC operation	0.5	°C/W
Mounting torque(M4)	M _D	-	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

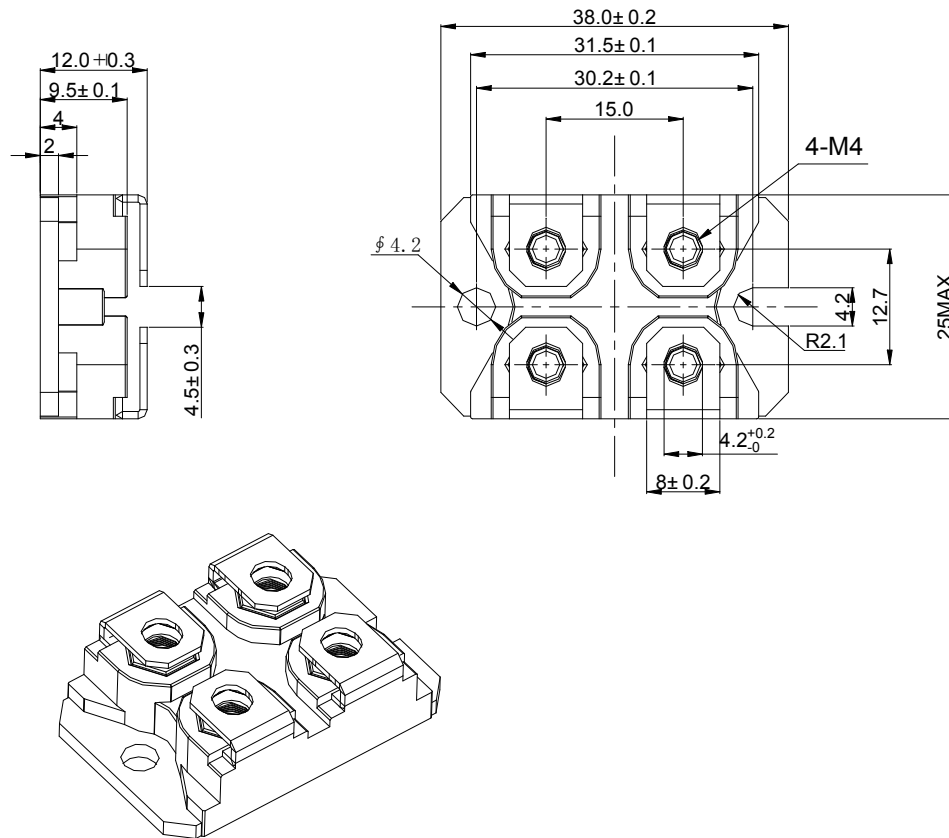
Device	Package	Shipping
SK2S160-100	SOT-227 (Pb-Free)	36pcs /BULK

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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