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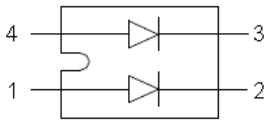
SK2S160-100 Power Schottky Rectifier

Applications:

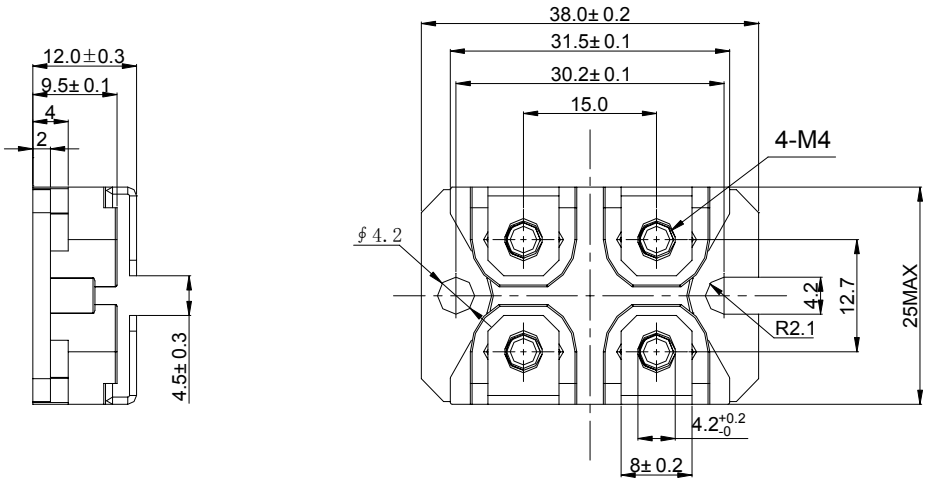
- **Rectifiers in switch mode power Supplies(SMPS)**
- **Insulated package(V_{ISO}=2500V_{RMS})**
- **Free wheeling diode in low voltage Converters**

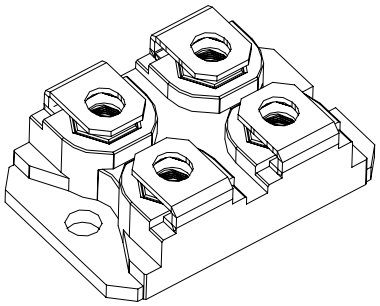


Features:

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

Mechanical Dimensions: In mm





SOT-227

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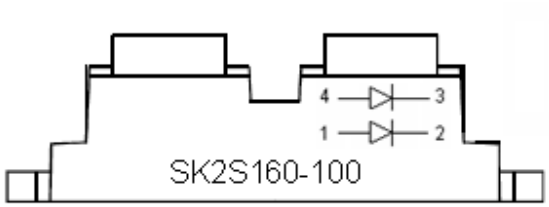
Marking Diagram:



S	= SMC's power module
K	= SOT-227 package
2	= Circuit configuration
S	= Schottky rectifier
160	= Forward Current (160A)
100	= Reverse Voltage (100V)

Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information:

Device	Package	Shipping
SK2S160-100	SOT-227 (Pb-Free)	10pcs / tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

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Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	100		V
Average Forward Current*	$I_{F(AV)}$	50% duty cycle @T_C = 105°C, rectangular wave form	peg leg	80	A
			peg device	160	
Peak One Cycle Non-Repetitive Surge Current (peg leg)	I_{FSM}	8.3 ms, half Sine pulse	1000		A
Non-Repetitive Avalanche Energy(peg leg)	E_{AS}	T_J=25℃,I_{AS}=12A,L=180μH non repetitive	16		mJ
Total Power Dissipation	P_{tot}	T_C=25℃	150		W
Repetitive Avalanche Current(peg leg)	I_{AR}	Current decaying linearly to zero in 1 μsec Frequency limited by T_J max.V_A=1.5×V_R typical	1.2		A

Electrical Characteristics:

Characteristics	Symbol	Condition	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 < 300μs, 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
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	0.9	°C/W
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.5	°C/W
Mounting torque(M4)	M_D	-	1.1-1.5/9-13	Nm/ lb.in.
Terminal connection torque(M4)			1.1-1.5/9-13	
Typical Approximate Weight	wt	-	30	g
Case Style	SOT-227			

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