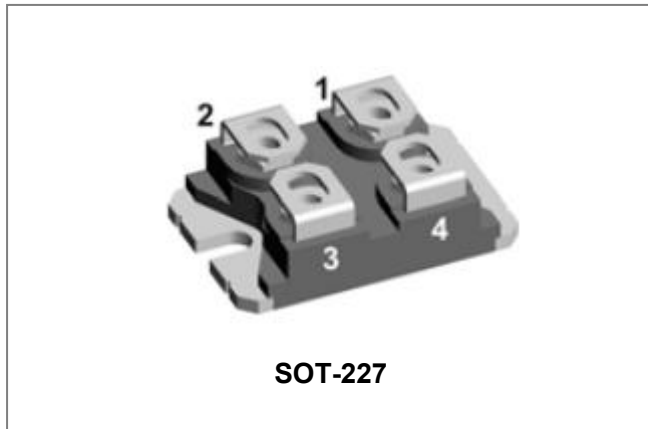


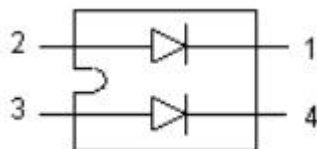
SK2S240-45 Power Schottky Rectifier



Features

- International standard package SOT-227
- Very low VF
- Extremely low switching losses
- Low I_{RM} -values
- Base plate: Nickel plated; Terminals: Nickel plated
- UL approved file E517293
- Recommend the use of M4 screws with spring washers for the mounting hardwares
- The terminal hardwares are provided in packing The mounting hardwares are not provided
- 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(VISO=2500VRMS)
- Free wheeling diode in low voltage Converters

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

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	45	V
Average Rectified Forward Current	$I_{F(AV)}$	$T_c = 80^\circ\text{C}$, In DC	120(Per Leg)	A
			240(Per Device)	
Peak One Cycle Non-Repetitive Surge Current (Per Leg)	I_{FSM}	8.3 ms, half Sine pulse	1650	A

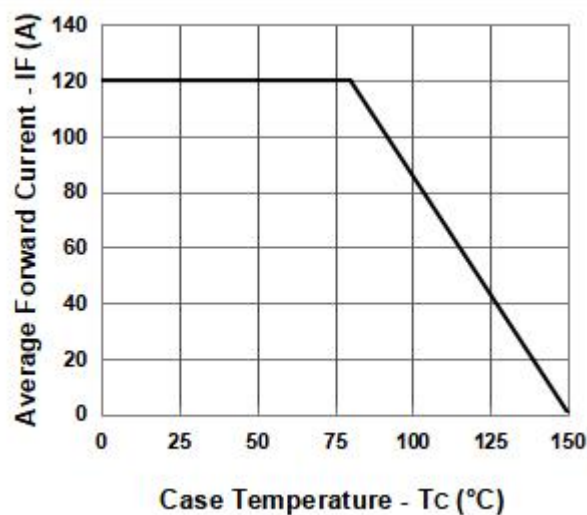
Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V_{F1}	@ 120A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.59	0.65	V
	V_{F2}	@ 120A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.57	0.60	V
Reverse Current(Per Leg)*	I_{R1}	@ $V_R = \text{rated } V_R, T_J = 25\text{ }^\circ\text{C}$	0.3	10	mA
	I_{R2}	@ $V_R = \text{rated } V_R, T_J = 125\text{ }^\circ\text{C}$	99	450	mA
Isolation Breakdown Voltage(R.M.S)	Visol	Ac.50Hz; R.M.S;1min, $T_J = 25\text{ }^\circ\text{C}$	-	2500	V
		Ac.50Hz; R.M.S;1sec, $T_J = 25\text{ }^\circ\text{C}$	-	3500	
Voltage Rate of Change	dv/dt	-	-	10000	V/ μs

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

Thermal-Mechanical Specifications:

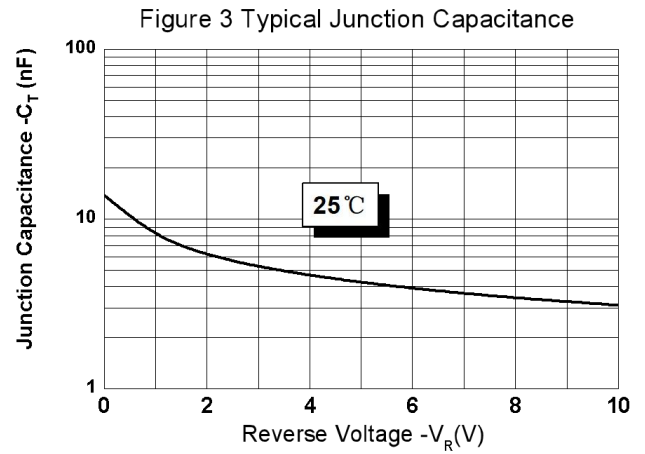
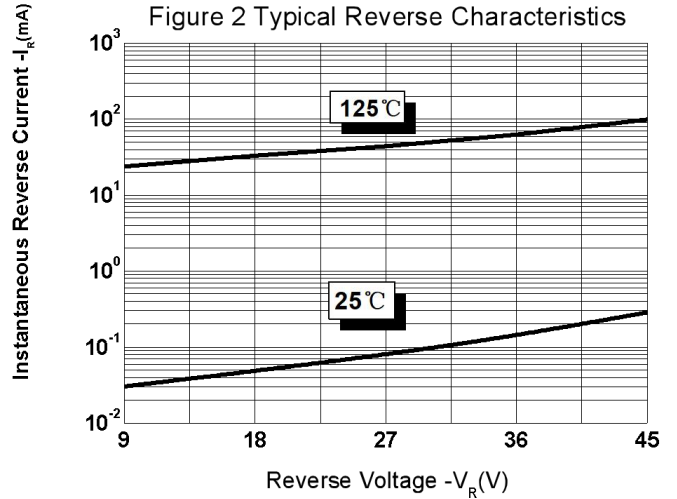
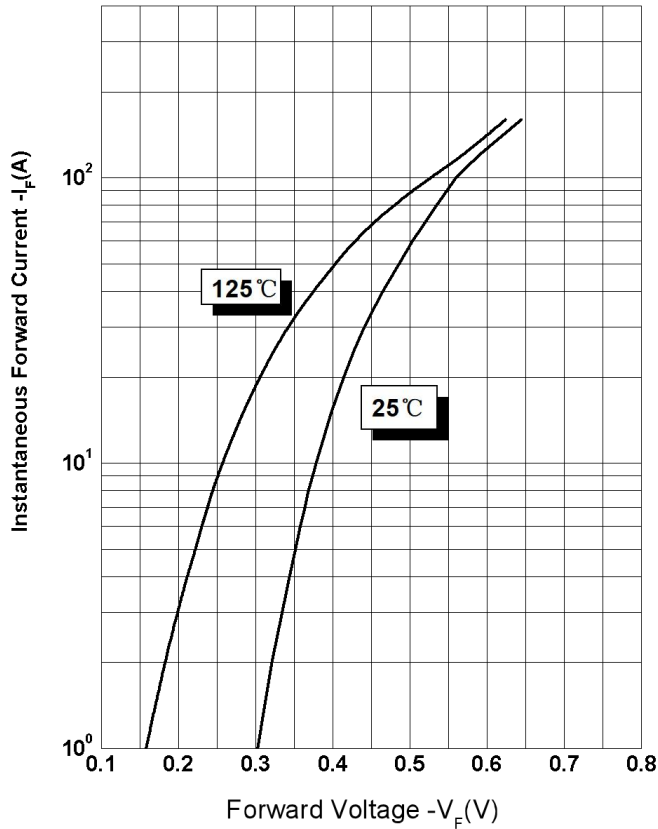
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$
Typical Thermal Resistance Junction to Case(Per Leg)	$R_{\theta\text{JC}}$	DC operation	0.9	$^\circ\text{C/W}$
Thermal Resistance Junction to Case(Peg Device)	$R_{\theta\text{JC}}$	DC operation	0.45	$^\circ\text{C/W}$
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

Ratings and Characteristics Curves


Forward Current VS Case temperature Diode

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

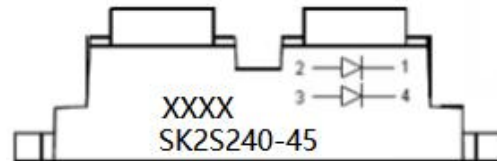
Figure1 Typical Forward Characteristics



Ordering Information

Device	Package	Shipping
SK2S240-45	SOT-227 (Pb-Free)	36pcs /BULK

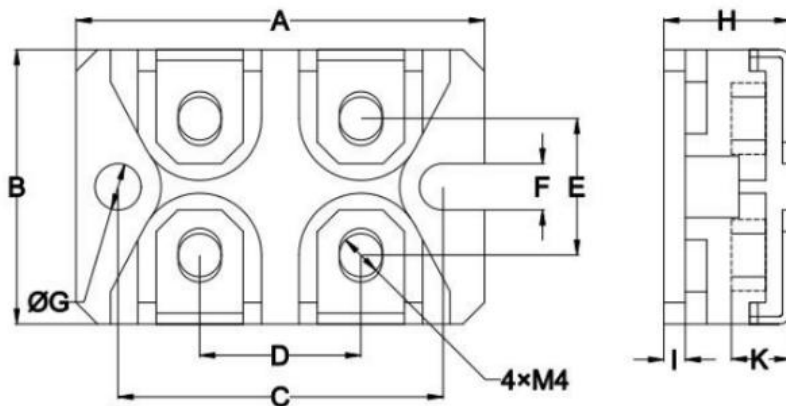
Marking Diagram



Where XXXX is YYWW

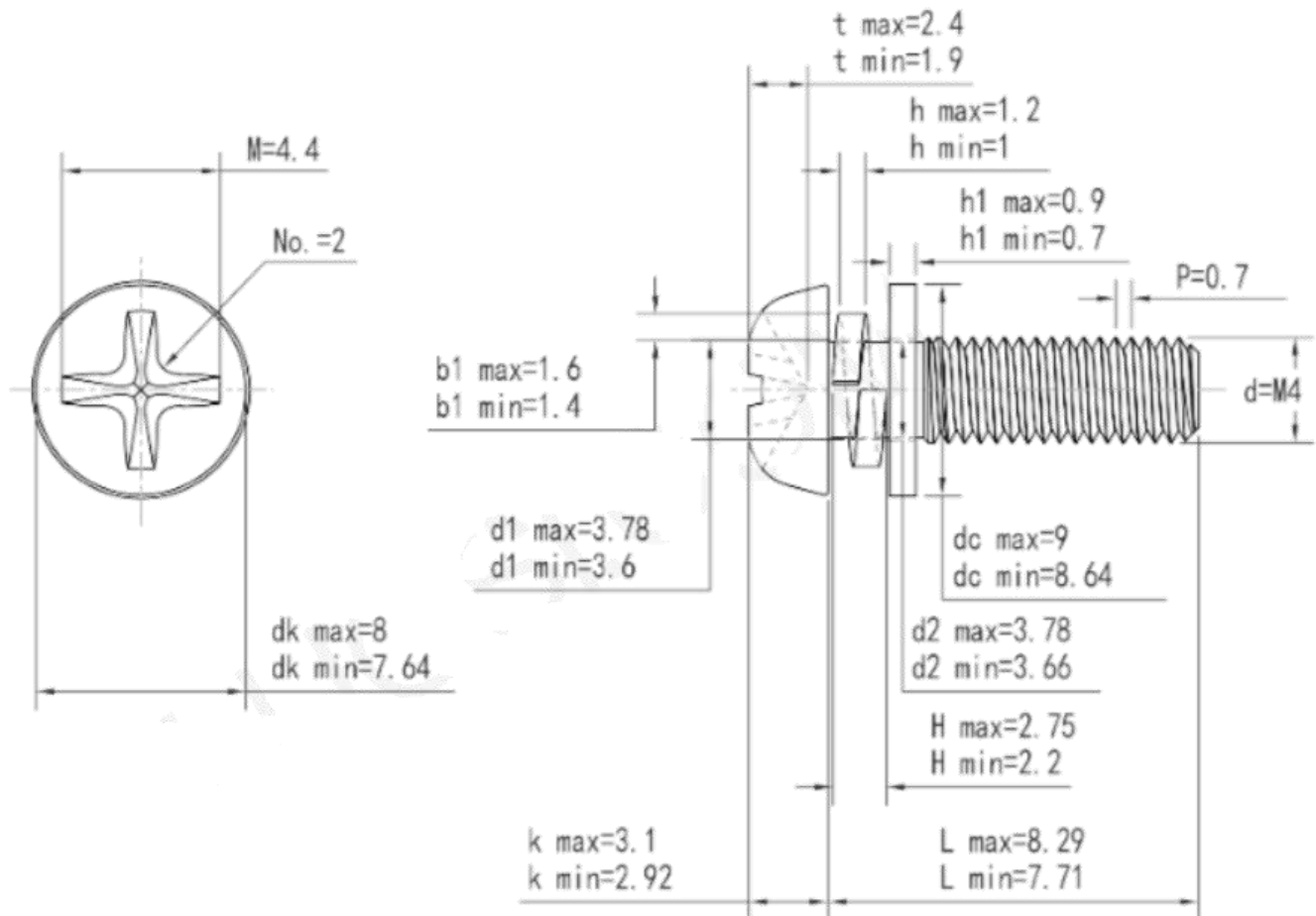
- S = SMC's Power Module
- K = SOT-227 Package
- 2 = Circuit Configuration
- S = Schottky Rectifier
- 240 = Forward Current (240A)
- 45 = Reverse Voltage (45V)
- YY = Year
- WW = Week

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

M4 screws-GB9074.4 (Millimeters)



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