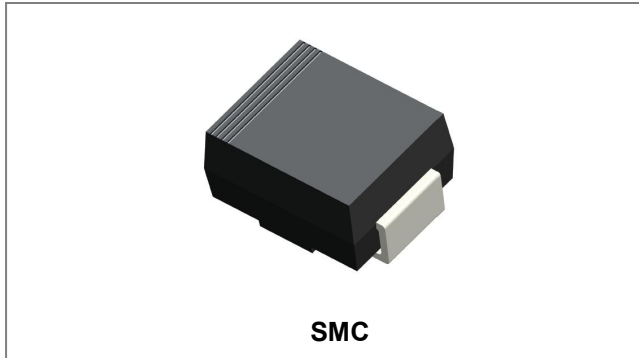


30BQ060 SCHOTTKY RECTIFIER



Features

- Small foot print, surface mountable
- Low forward voltage drop
- High frequency operation
- Terminals finish: Tin Lead-free plated
- Guard ring for enhanced ruggedness and long term reliability
- 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

- Disk Drives
- Switching power supply
- Redundant power subsystems
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Battery Charging

Maximum Ratings@T_A=25°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	-	60	V
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _C =123°C, rectangular wave form	3	A
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3 ms, half Sine pulse	80	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 3 A, Pulse, T _J = 25 °C	0.53	0.58	V
		@ 6 A, Pulse, T _J = 25 °C	0.69	0.76	
Reverse Current*	I _{R1}	@ V _R = Rated V _R , Pulse, T _J = 25 °C	0.02	0.5	mA
		@ V _R = Rated V _R , Pulse, T _J = 100 °C	-	20	
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	123	180	pF
Voltage Rate of Change	dv/dt	-	-	10,000	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 Lead	$R_{\theta\text{JL}}$	-	12	$^{\circ}\text{C}/\text{W}$
Typical Thermal Resistance Junction to Case	$R_{\theta\text{JA}}$	DC operation	46	$^{\circ}\text{C}/\text{W}$
Approximate Weight	wt	-	0.21	g
Case Style	SMC			

Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

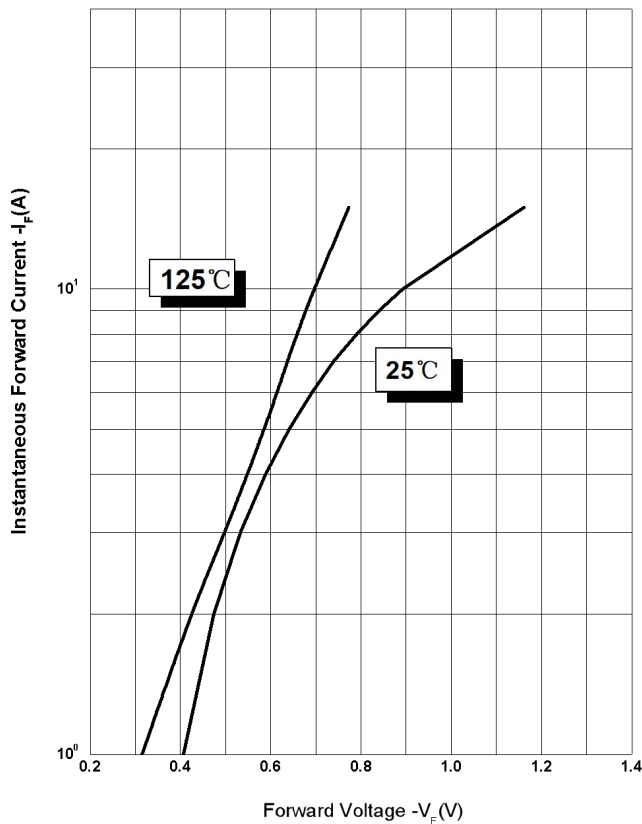


Figure 2 Typical Reverse Characteristics

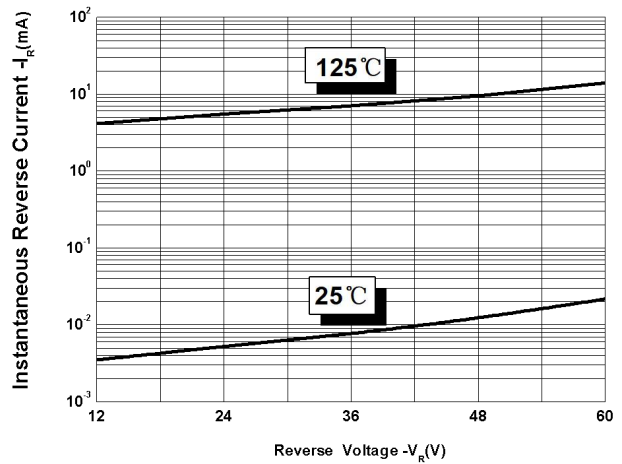
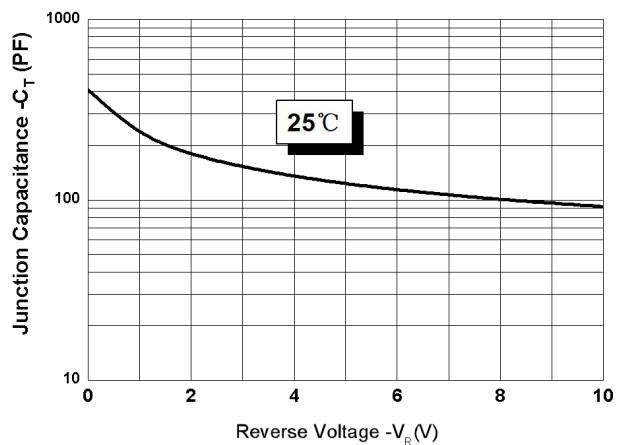
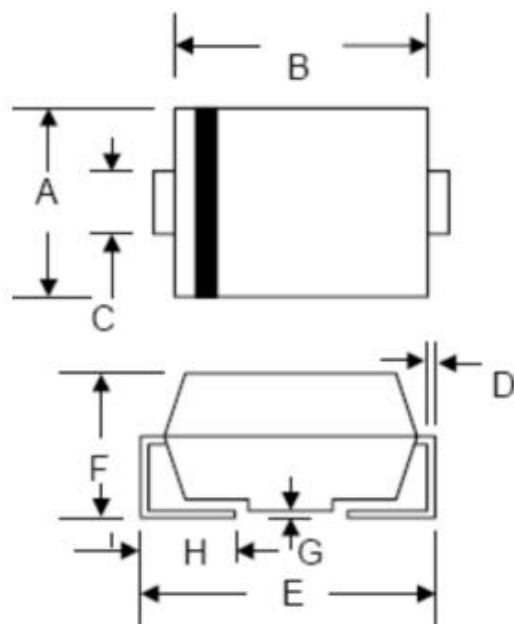


Figure 3 Typical Junction Capacitance



Mechanical Dimensions SMC



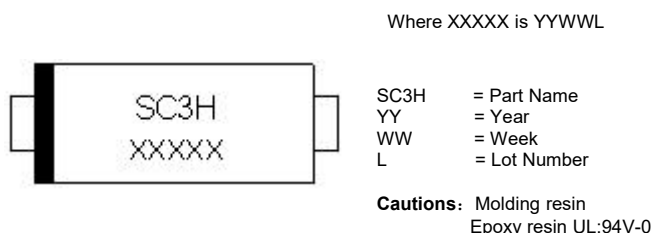
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.59	6.22	0.220	0.245
B	6.60	7.11	0.260	0.280
C	2.75	3.25	0.108	0.128
D	0.152	0.305	0.006	0.012
E	7.75	8.25	0.305	0.325
F	2.00	2.95	0.079	0.116
G	0.051	0.203	0.002	0.008
H	0.76	1.60	0.030	0.063

Ordering Information

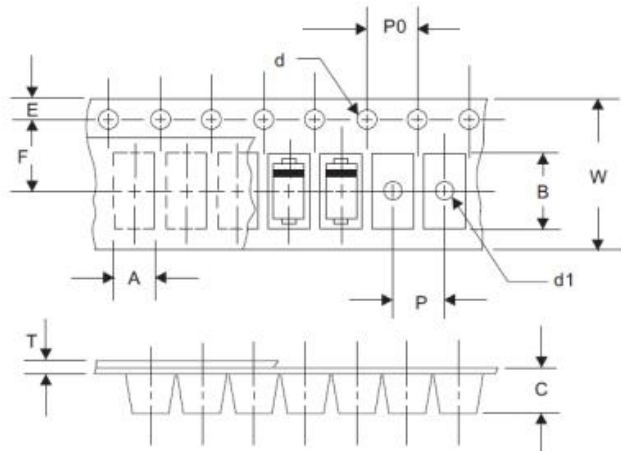
Device	Package	Shipping
30BQ060	SMC (Pb-Free)	3000pcs / reel
30BQ060TR	SMC (Pb-Free)	3000pcs / reel

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

Marking Diagram



Carrier Tape Specification SMC



SYMBOL	Millimeters	
	Min.	Max.
A	5.95	6.15
B	8.10	8.30
C	2.60	2.80
d	1.40	1.60
E	1.65	1.85
F	7.40	7.60
P	7.90	8.10
P0	3.90	4.10
T	0.20	0.40
W	15.70	16.30

Technical Data
Data Sheet N0675, Rev. B



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