



30BQ040 SCHOTTKY RECTIFIER

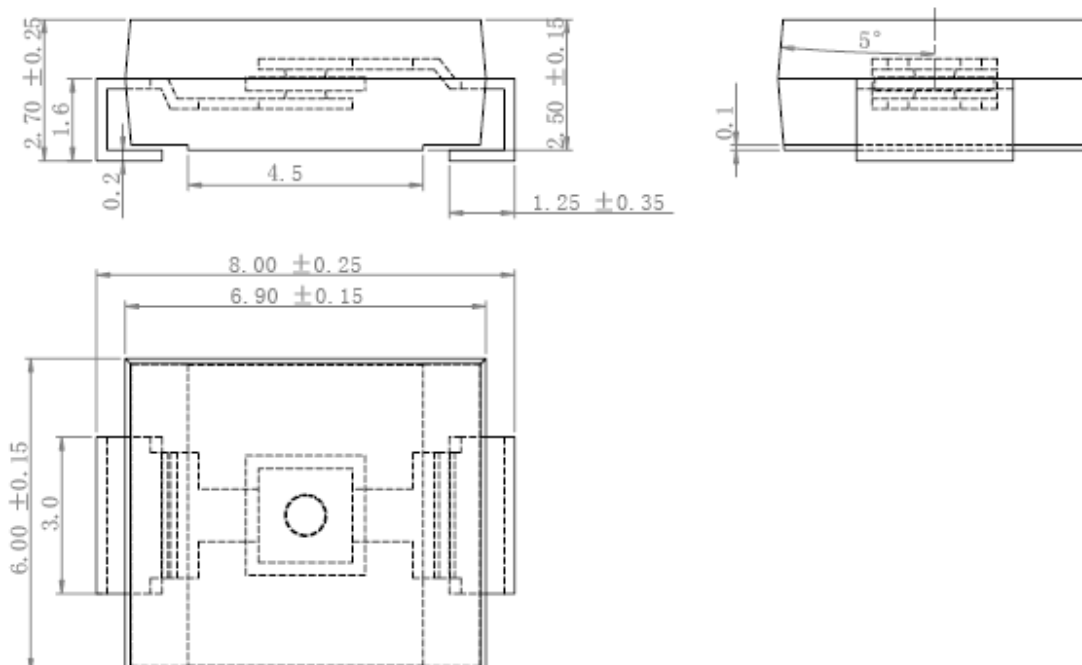
Applications:

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

Features:

- Small foot print, surface mountable
- Low forward voltage drop
- High frequency operation
- 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

Mechanical Dimensions (In mm / Inches):



SMC



Technical Data
Data Sheet N0674, Rev. -

Green Products

Marking Diagram:



Where XXXXX is YYWWL

SC3F = Part Name
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

Device	Package	Shipping
30BQ040	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.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	40	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=118^\circ\text{C}$, rectangular wave form	3.0	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	132	A



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Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V _{F1}	@ 3 A, Pulse, T _J = 25 °C	0.53	V
		@ 6 A, Pulse, T _J = 25 °C	0.68	
	V _{F2}	@ 3 A, Pulse, T _J = 125 °C	0.43	V
		@ 6 A, Pulse, T _J = 125 °C	0.57	
Max. Reverse Current *	I _{R1}	@V _R = Rated V _R , Pulse, T _J = 25 °C	0.5	mA
	I _{R2}	@V _R = Rated V _R , Pulse, T _J = 125 °C	30	mA
Max. Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	230	PF
Typical Series Inductance	L _S	Measured lead to lead 5 mm from package body	3.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/μs

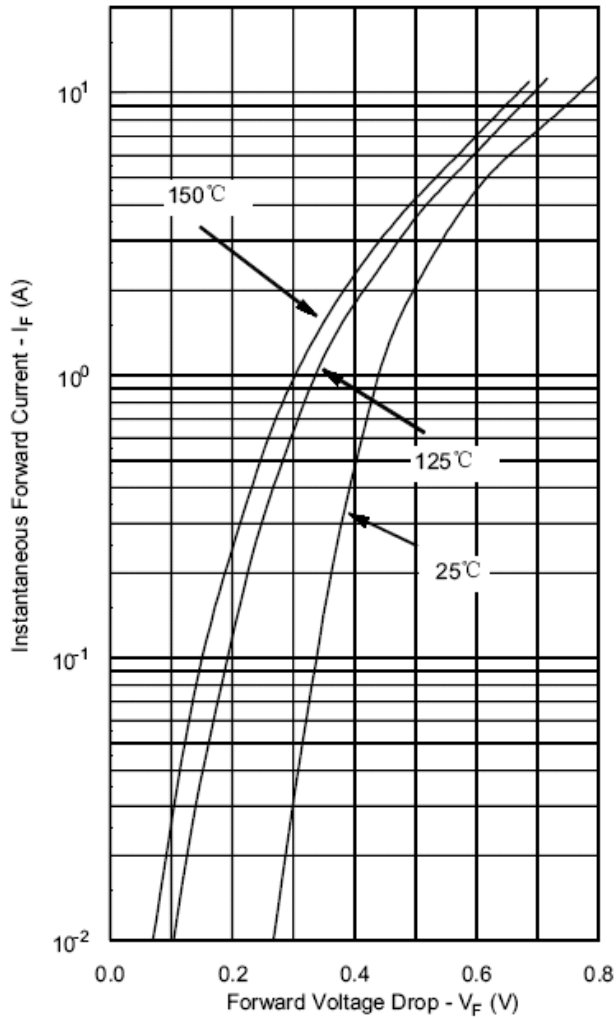
* Pulse Width < 300μs, Duty Cycle < 2%

Thermal-Mechanical Specifications:

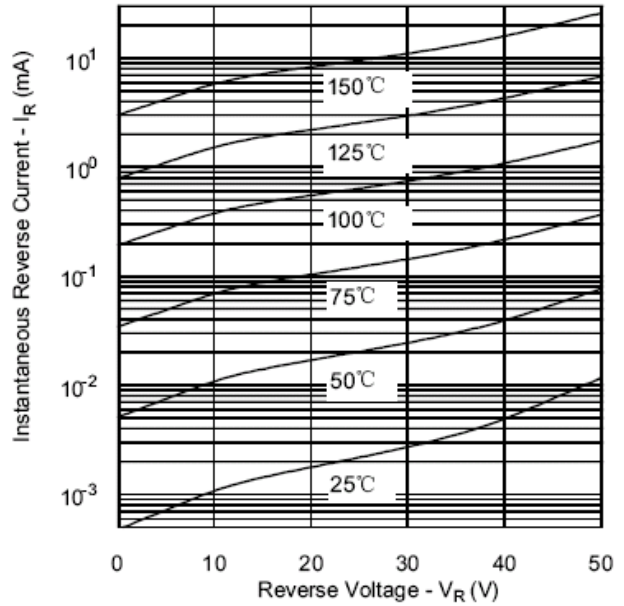
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T _J	-	-55 to +150	°C
Max. Storage Temperature	T _{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Lead	R _{θJL}	DC operation	12	°C/W
Maximum Thermal Resistance Junction to Case	R _{θJA}	DC operation	46	°C/W
Approximate Weight	wt	-	0.65	g
Case Style	SMC			



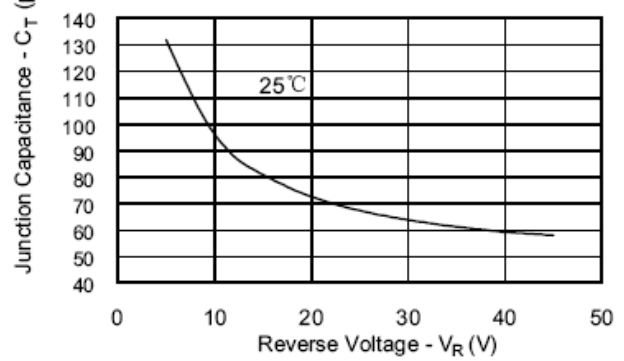
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance





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