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15MQ045N SCHOTTKY RECTIFIER

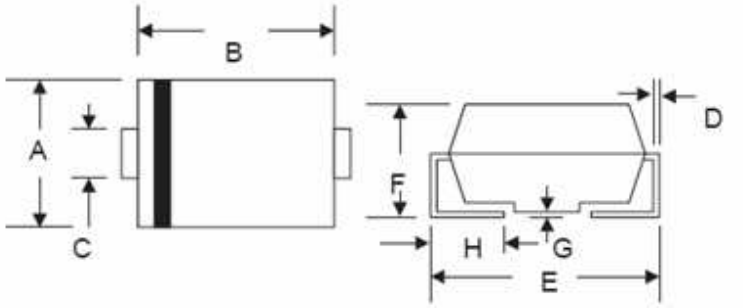
Applications:

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

Features:

- **Small foot print, surface moutable**
- **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):

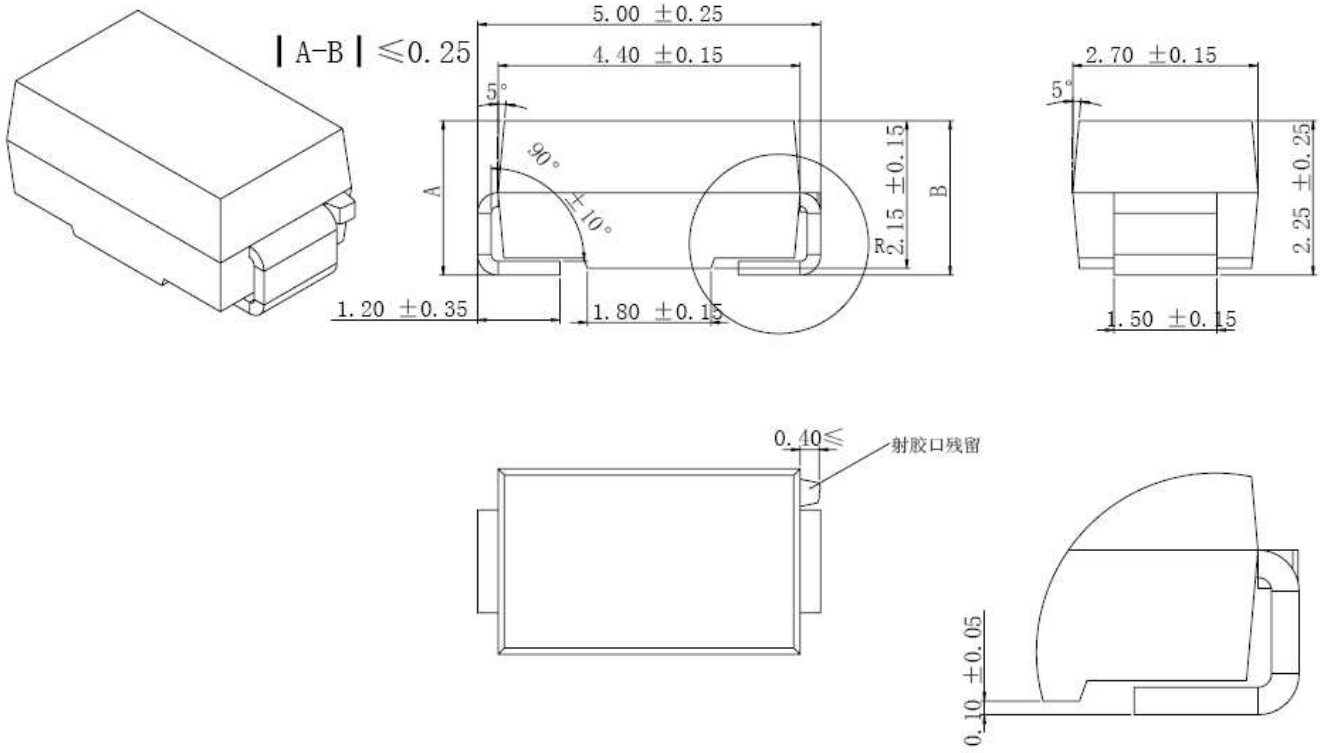


SMA/DO-214AC				
Dim	Min	Max	Min	Max
A	2.50	2.90	0.098	0.114
B	4.00	4.60	0.157	0.181
C	1.40	1.60	0.055	0.063
D	0.152	0.305	0.006	0.012
E	4.80	5.28	0.189	0.208
F	2.00	2.44	0.079	0.096
G	0.051	0.203	0.002	0.008
H	0.76	1.52	0.030	0.060
	In mm		In inch	

OPTION 1

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OPTION2 (JK)

SMA

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Marking Diagram:



Where XXXXX is YYWWL

S	= Device Type
D	= Package Type
15	= Forward Current (1.5A)
G	= Reverse Voltage (45V)
YY	= Year
WW	= Week
L	= Lot Number

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

Ordering Information:

Device	Package	Shipping
SD15G	SMA (Pb-Free)	5000pcs / 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}	-	45	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_L =105℃, rectangular wave form On PC board 9mm^2 island	2.1	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	10 ms, half Sine pulse	60	A

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Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@ 1 A, Pulse, T_J = 25 ℃ @ 2 A, Pulse, T_J = 25 ℃	0.42 0.49	V
	V_{F2}	@ 1 A, Pulse, T_J = 100 ℃ @ 2 A, Pulse, T_J = 100 ℃	0.34 0.43	V
Max. Reverse Current *	I_{R1}	@V_R = Rated V_R, Pulse, T_J = 25 ℃	1.0	mA
	I_{R2}	@V_R = Rated V_R, Pulse, T_J = 125 ℃	20	mA
Max. Junction Capacitance	C_T	@V_R = 10V, T_C = 25 ℃ f_{SIG} = 1MHz	134	PF
Typical Series Inductance	L_S	Measured lead to lead 5 mm from package body	2.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/μs

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

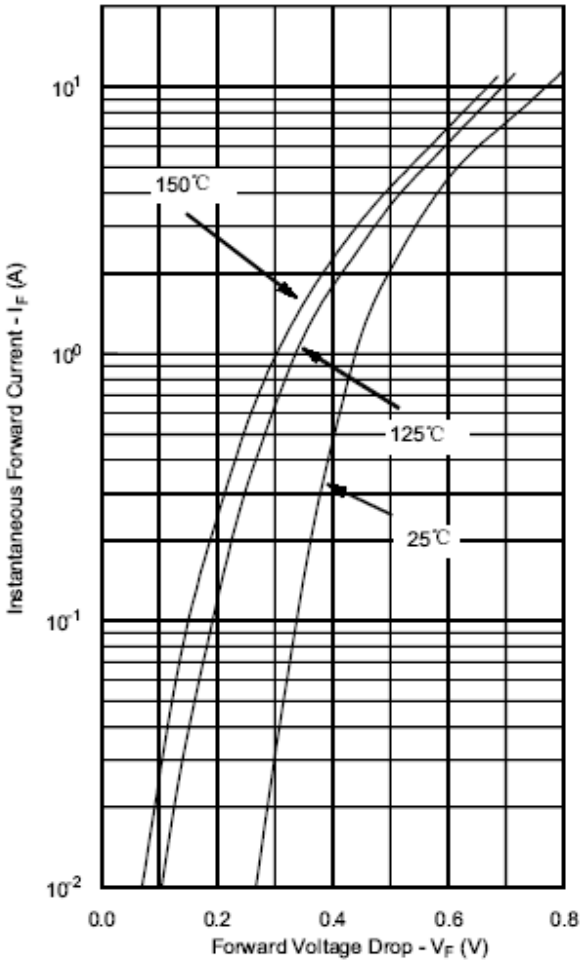
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +150	℃
Max. Storage Temperature	T_{stg}	-	-55 to +150	℃
Maximum Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	80	℃/W
Approximate Weight	wt	-	0.17	g
Case Style	SMA			

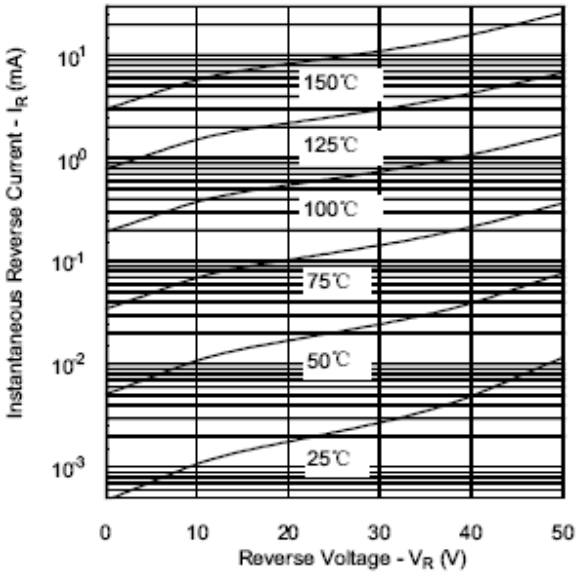
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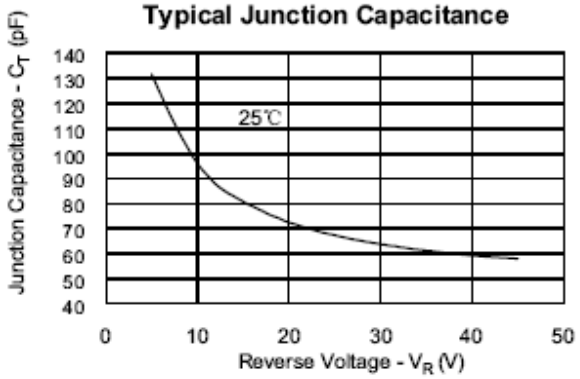
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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