

## 15MQ045N SCHOTTKY RECTIFIER

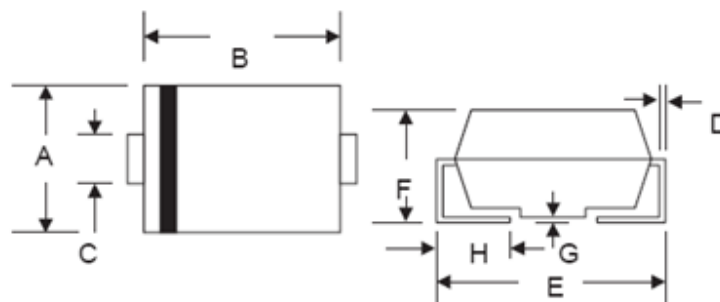
### Applications:

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

### Features:

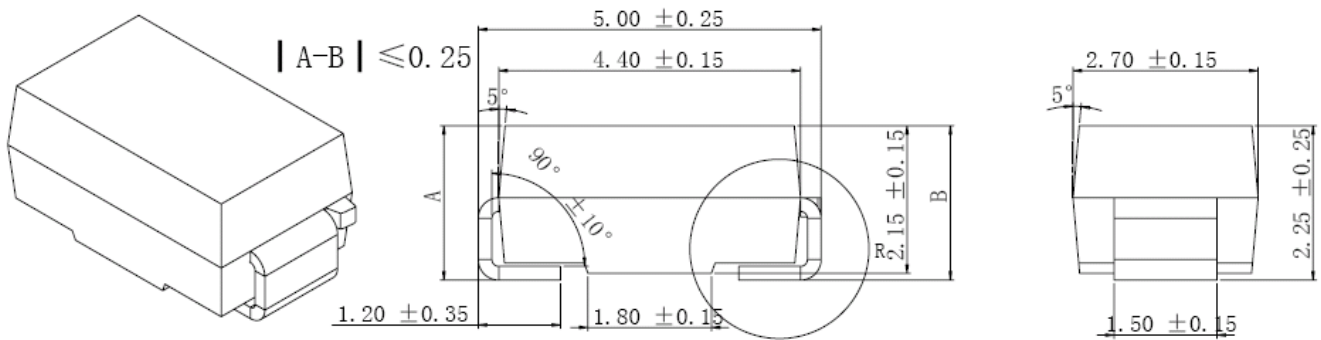
- Small foot print, surface moutable
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Mechanical Dimensions (In mm / Inches):



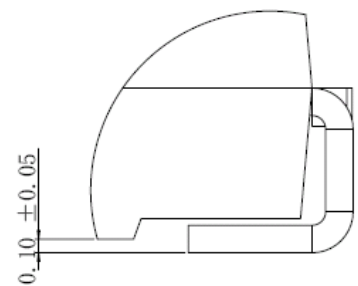
SMA/DO-214AC				
Dim	Min	Max	Min	Max
A	2.50	2.90	0.098	0.114
B	4.00	4.60	0.157	0.181
C	1.40	1.60	0.055	0.063
D	0.152	0.305	0.006	0.012
E	4.80	5.28	0.189	0.208
F	2.00	2.44	0.079	0.096
G	0.051	0.203	0.002	0.008
H	0.76	1.52	0.030	0.060
	In mm		In inch	

### OPTION 1



**OPTION2 (JK)**

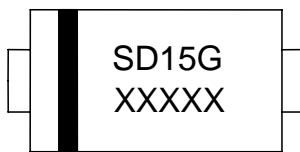
**SMA**



Technical Data  
Data Sheet N0665, Rev. -

*Green Products*

**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
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_L=105^{\circ}C$ , rectangular wave form On PC board 9mm <sup>2</sup> island	2.1	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	60	A

**Technical Data**  
**Data Sheet N0665, Rev. -**
**Green Products**
**Electrical Characteristics:**

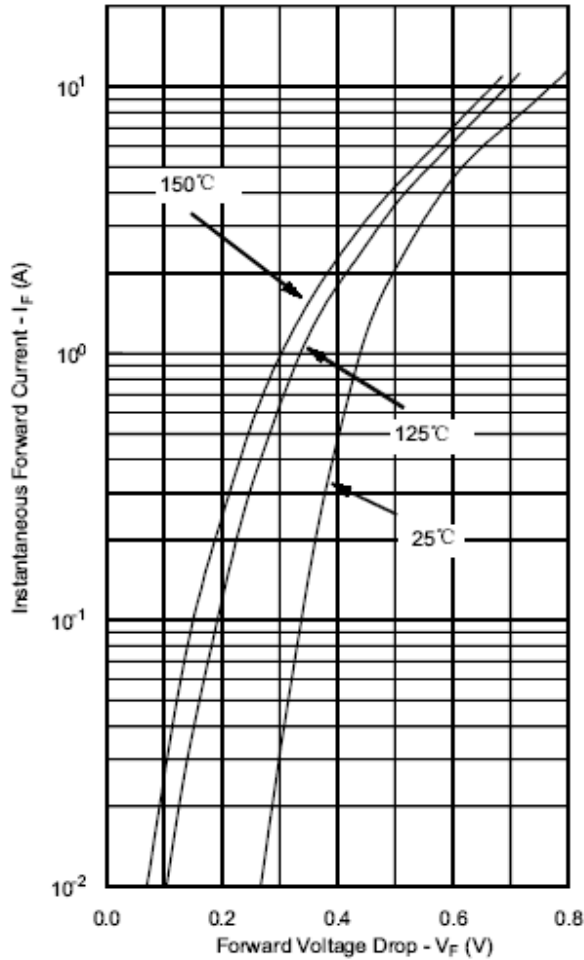
Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 1 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.42	V
		@ 2 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.49	
	$V_{F2}$	@ 1 A, Pulse, $T_J = 100\text{ }^\circ\text{C}$	0.34	V
		@ 2 A, Pulse, $T_J = 100\text{ }^\circ\text{C}$	0.43	
Reverse Current *	$I_{R1}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 25\text{ }^\circ\text{C}$	1.0	mA
	$I_{R2}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 125\text{ }^\circ\text{C}$	20	mA
Junction Capacitance	$C_T$	@ $V_R = 10\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	134	PF
Voltage Rate of Change	$dv/dt$	-	10,000	V/ $\mu\text{s}$

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle < 2%

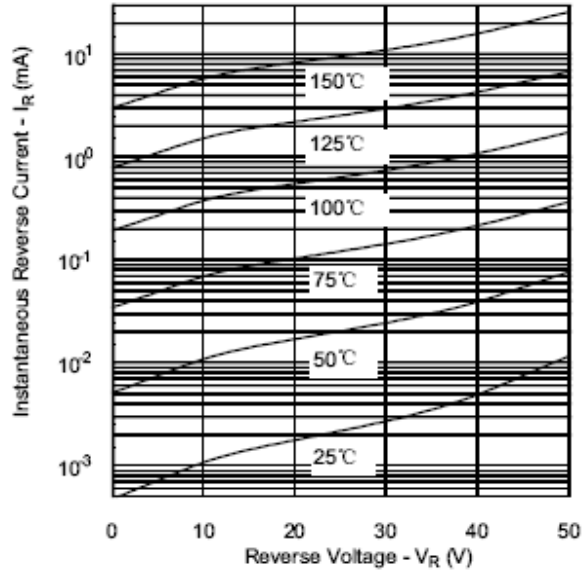
**Thermal-Mechanical Specifications:**

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

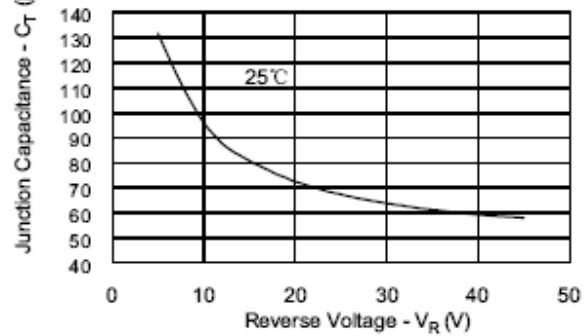
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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