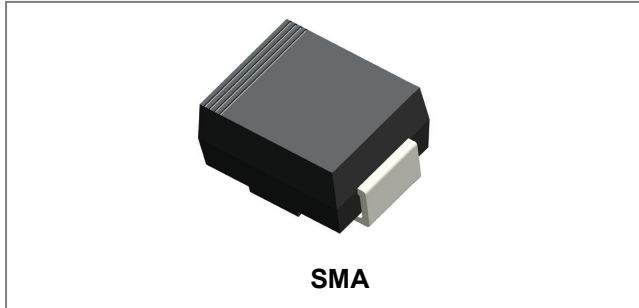


## 10MQ040N SCHOTTKY RECTIFIER



### 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

### Circuit Diagram



### Applications

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

### Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	$V_{RRM}$	-	40	V
Working Peak Reverse Voltage	$V_{RWM}$			
DC Blocking Voltage	$V_R$			
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_L = 105^\circ\text{C}$ , rectangular wave form On PC board 9mm <sup>2</sup> island	1	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse	36	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 1 A, Pulse, $T_J = 25^\circ\text{C}$	0.52	0.54	V
	$V_{F2}$	@ 1 A, Pulse, $T_J = 125^\circ\text{C}$	0.47	0.49	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 25^\circ\text{C}$	0.003	0.5	mA
	$I_{R2}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 125^\circ\text{C}$	2	26	mA
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	54	70	PF
Typical Series Inductance	$L_S$	Measured lead to lead 5 mm from package body	2.0	-	nH
Voltage Rate of Change	$dv/dt$	-	-	10,000	V/ $\mu\text{s}$

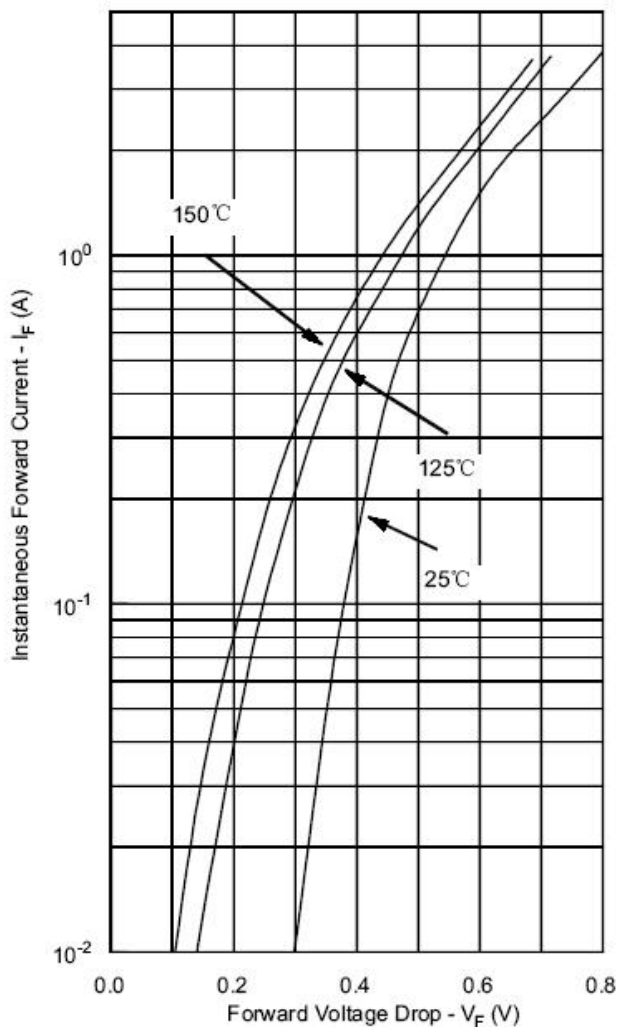
\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

**Thermal-Mechanical Specifications:**

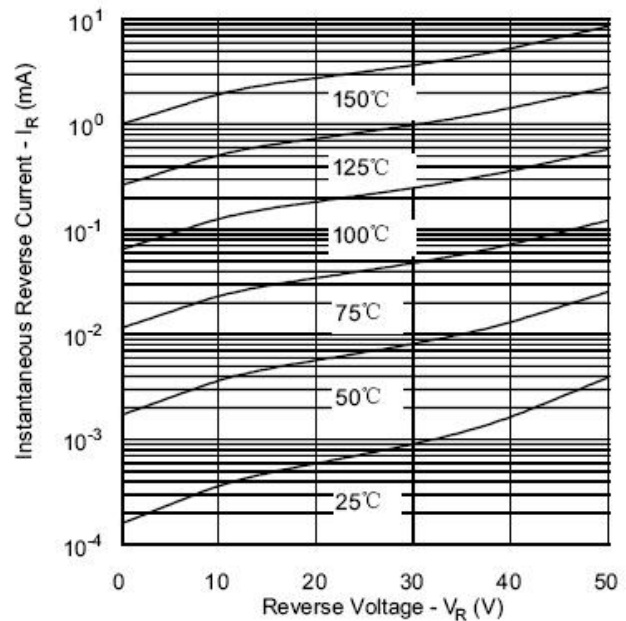
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +125	°C
Storage Temperature	$T_{stg}$	-	-55 to +150	°C
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	-	80	°C/W
Approximate Weight	wt	-	0.06	g
Case Style		SMA		

**Ratings and Characteristics Curves**

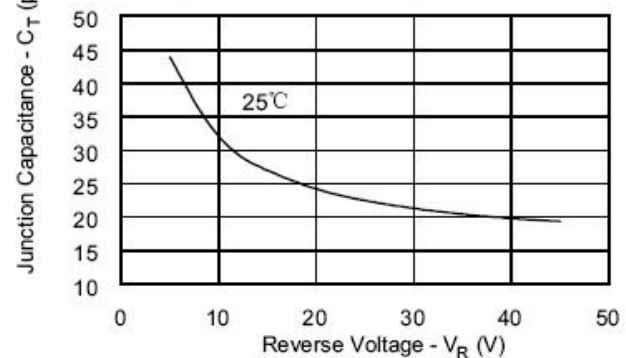
Typical Forward Characteristics



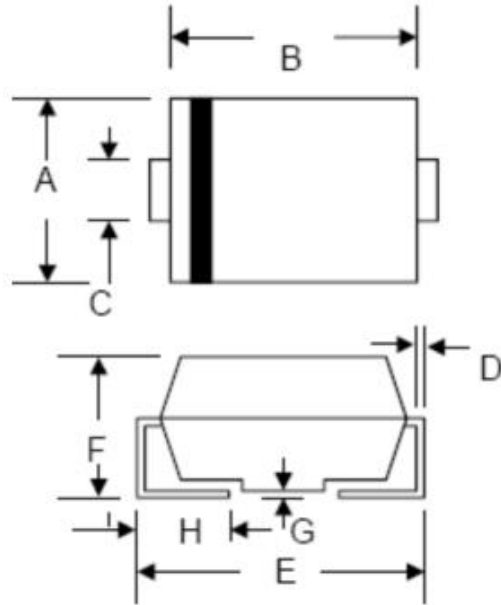
Typical Reverse Characteristics



Typical Junction Capacitance



**Mechanical Dimensions SMA**



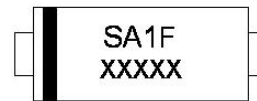
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.55	2.85	0.100	0.112
B	4.25	4.55	0.167	0.179
C	1.35	1.65	0.053	0.065
D	0.15	0.25	0.006	0.010
E	4.75	5.25	0.187	0.207
F	2.00	2.50	0.079	0.098
G	0.05	0.15	0.002	0.006
H	0.85	1.55	0.033	0.061

**Ordering Information**

Device	Package	Shipping
10MQ040N	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.

**Marking Diagram**

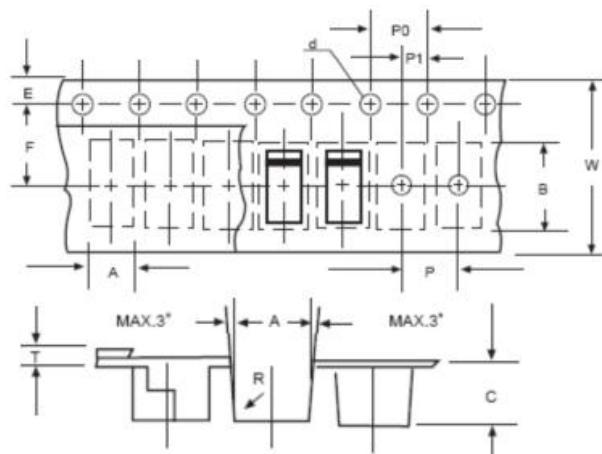


Where XXXXX is YYWWL

- S = Device Type
- A = Package Type
- 1 = Forward Current (1A)
- F = Reverse Voltage (40V)
- YY = Year
- WW = Week
- L = Lot Number

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

**Carrier Tape & Reel Specification SMA**



SYMBOL	Millimeters	
	Min.	Max.
A	2.97	3.17
B	5.70	5.90
C	2.32	2.52
d	1.40	1.60
E	1.40	1.60
F	5.60	5.70
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
T	0.25	0.35
W	11.80	12.20

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