

10MQ100N-S SCHOTTKY RECTIFIER



Features

- Small foot print, surface moutable
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Terminals finish: 100% Pure Tin
- 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}		100	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	1.5	A
DC Current	$I_{F(DC)}$	DC@ $T_L = 120^\circ\text{C}$	2.1	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	36	A

Electrical Characteristics:

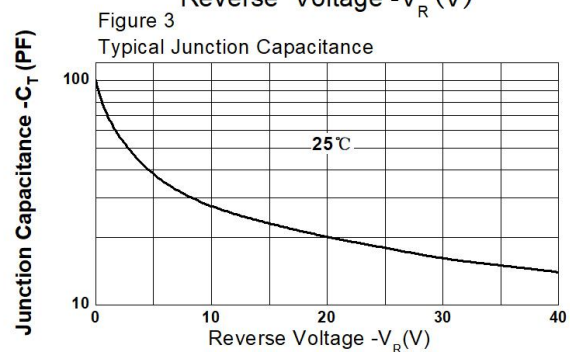
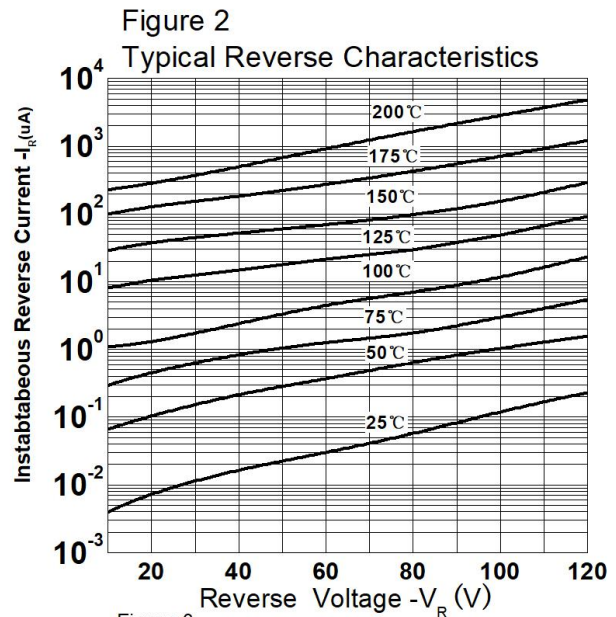
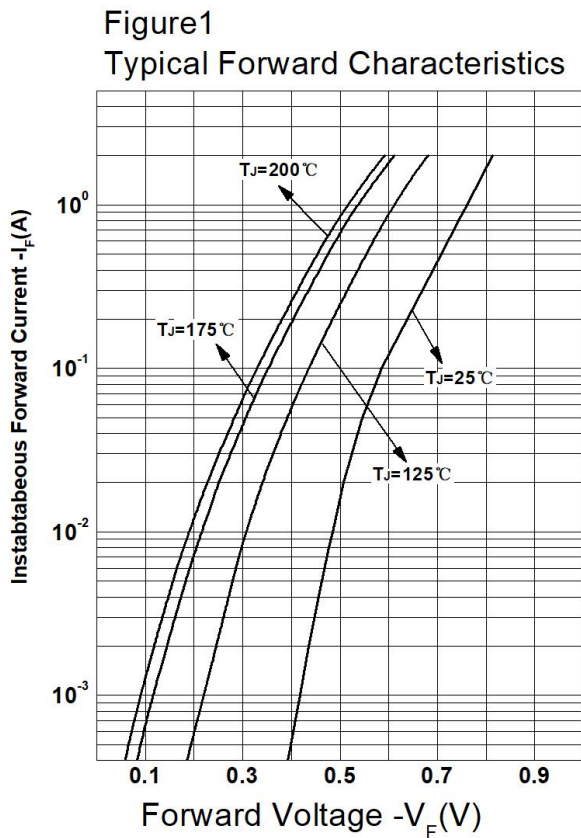
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 1 A, Pulse, $T_J = 25^\circ\text{C}$	0.76	0.78	V
	V_{F2}	@ 1.5 A, Pulse, $T_J = 25^\circ\text{C}$	0.79	0.85	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R$, Pulse, $T_J = 25^\circ\text{C}$	0.1	100	μA
	I_{R2}	@ $V_R = \text{rated } V_R$, Pulse, $T_J = 125^\circ\text{C}$	0.05	1	mA
Junction Capacitance	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$, $f_{SIG} = 1\text{MHz}$	36	38	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/ μs

* Pulse width < 300 μs , duty cycle < 2%

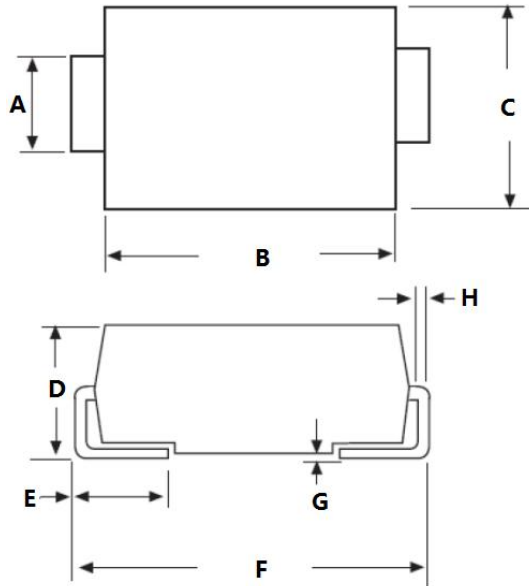
Thermal-Mechanical Specifications:

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 Ambient	$R_{\theta JA}$	-	80	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	0.06	g
Case Style		SMA		

Ratings and Characteristics Curves



Mechanical Dimensions SMA(Millimeters/Inches)



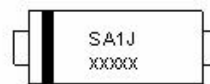
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.25	1.65	0.049	0.065
B	3.95	4.60	0.156	0.181
C	2.25	2.95	0.089	0.116
D	1.95	2.90	0.077	0.114
E	0.75	1.60	0.030	0.063
F	4.80	5.60	0.189	0.220
G	0.05	0.20	0.002	0.008
H	0.15	0.41	0.006	0.016

Ordering Information

Device	Package	Shipping
10MQ100N-S	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

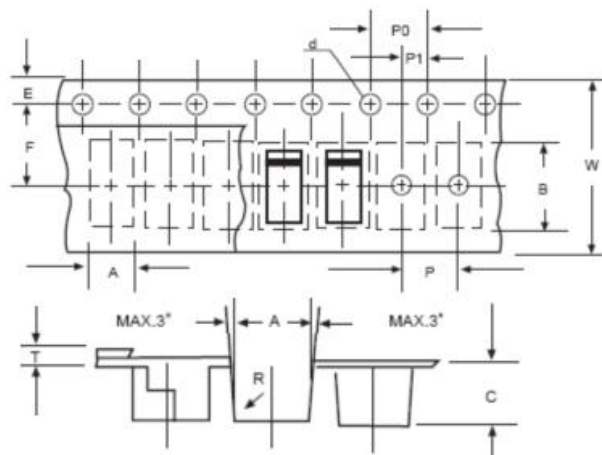


Where XXXXX is YYWWL

- S = Device Type
- A = Package Type
- 1 = Forward Current (1A)
- J = Reverse Voltage (100V)
- 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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