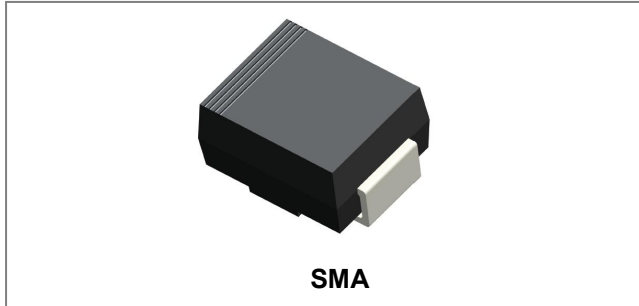




**THE DATASHEET OF
10MQ150N**



10MQ150N SCHOTTKY RECTIFIER



Features

- Small foot print, surface mountable
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Terminals finish: Tin Lead-free plated
- 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 (limiting values, $T_c = 25^\circ\text{C}$ unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	150	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_L = 123^\circ\text{C}$, rectangular wave form On PC board 9mm^2 island	1	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	20	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 1 A, Pulse, $T_J = 25^\circ\text{C}$	0.80	0.86	V
	V_{F2}	@ 1 A, Pulse, $T_J = 125^\circ\text{C}$	0.65	0.70	V
Reverse Current*	I_{R1}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 25^\circ\text{C}$	0.07	0.5	mA
	I_{R2}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 125^\circ\text{C}$	1.6	10	mA
Junction Capacitance	C_T	@ $V_R = 5\text{V}$, $T_c = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	27	45	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 +175	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +175	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta\text{JA}}$	-	80	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	0.06	g
Case Style		SMA		

Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

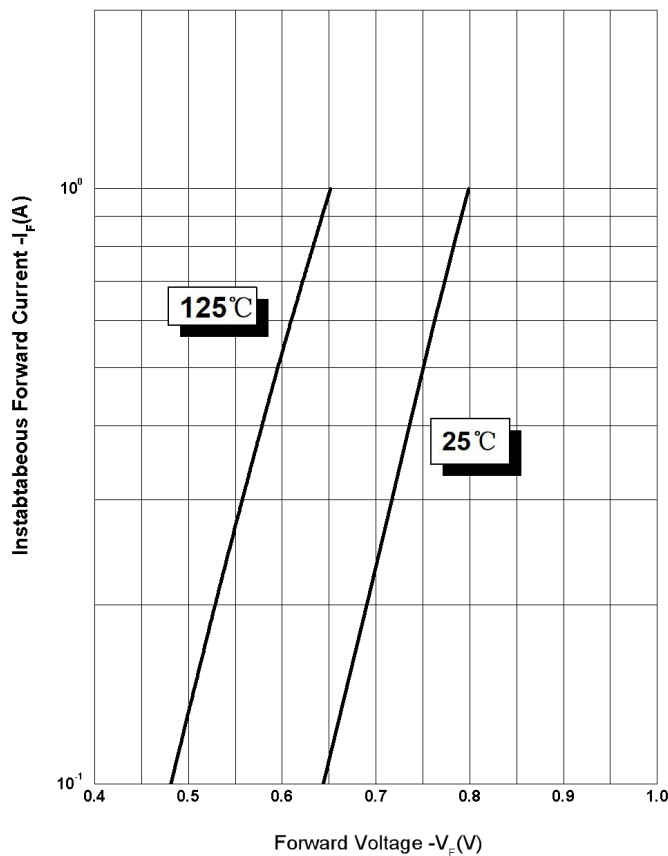


Figure 2 Typical Reverse Characteristics

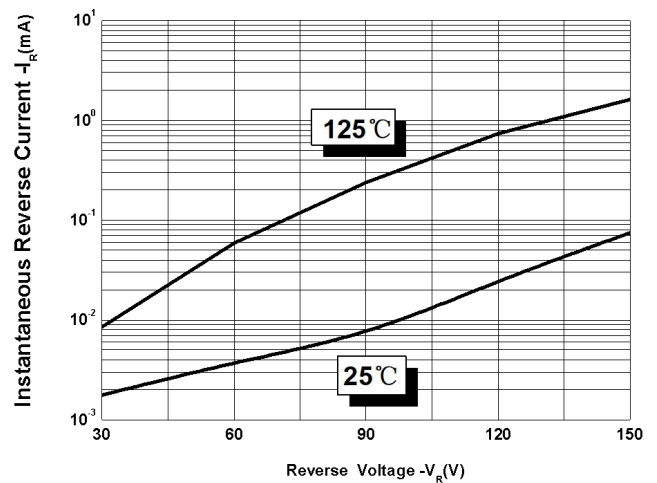
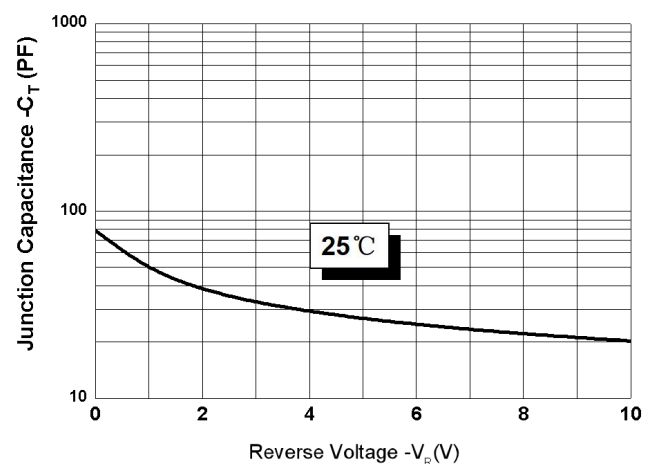
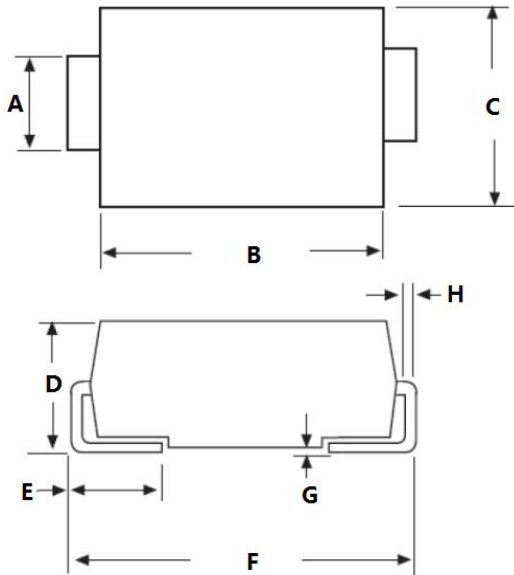


Figure 3 Typical Junction Capacitance



Mechanical Dimensions SMA



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.25	1.65	0.049	0.065
B	3.95	4.6	0.156	0.181
C	2.25	2.95	0.089	0.116
D	1.95	2.9	0.077	0.114
E	0.75	1.6	0.03	0.063
F	4.8	5.6	0.189	0.22
G	0.05	0.2	0.002	0.008
H	0.15	0.41	0.006	0.016


Ordering Information

Device	Package	Shipping
10MQ150N	SMA (Pb-Free)	5000pcs / reel
10MQ150NTR	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

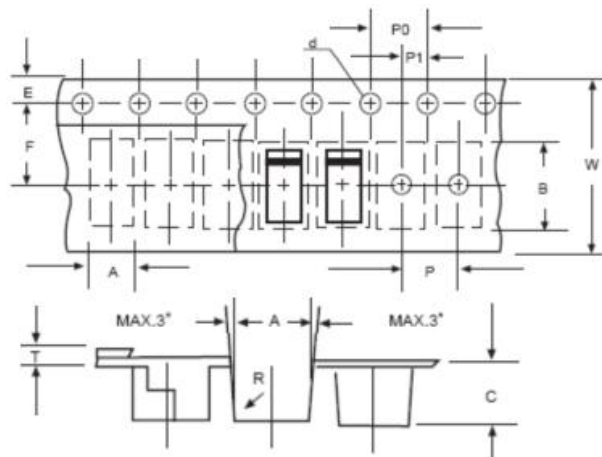
Where XXXXX is YYWWL



S = Device Type
 A = Package Type
 1 = Forward Current (1A)
 M = Reverse Voltage (150V)
 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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