

10MQ100N-S SCHOTTKY RECTIFIER

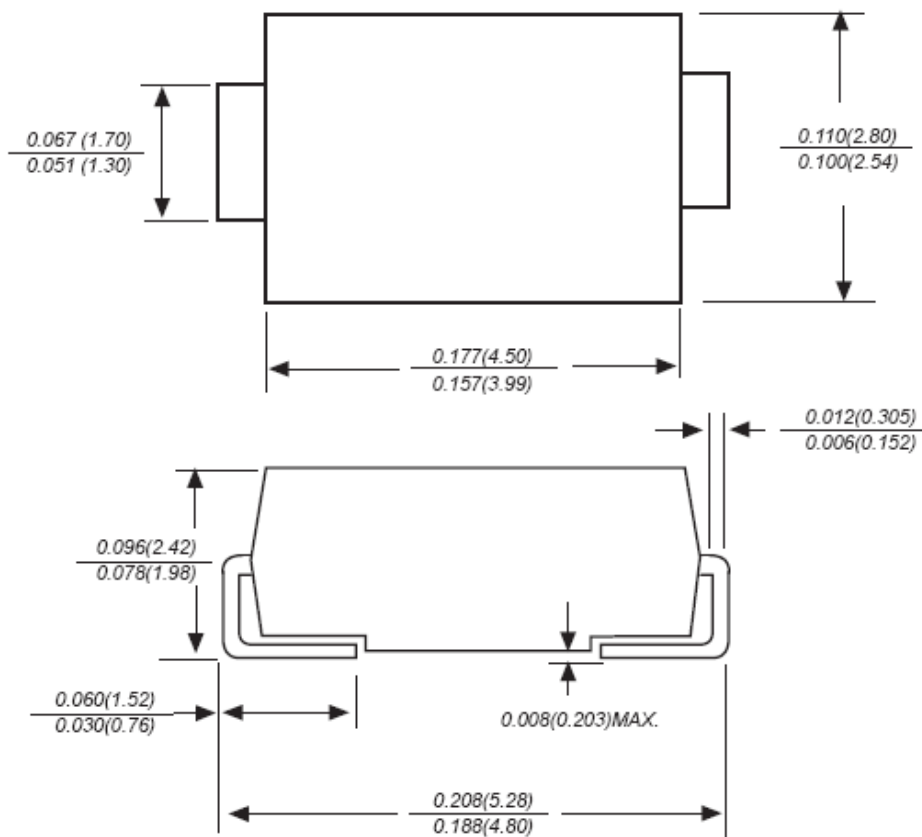
Applications:

- 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 Inches / mm):



SMA (DO-214AC)

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

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

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.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	100	V
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 (per leg)	I_{FSM}	8.3 ms, half Sine pulse	36	A



Electrical Characteristics:

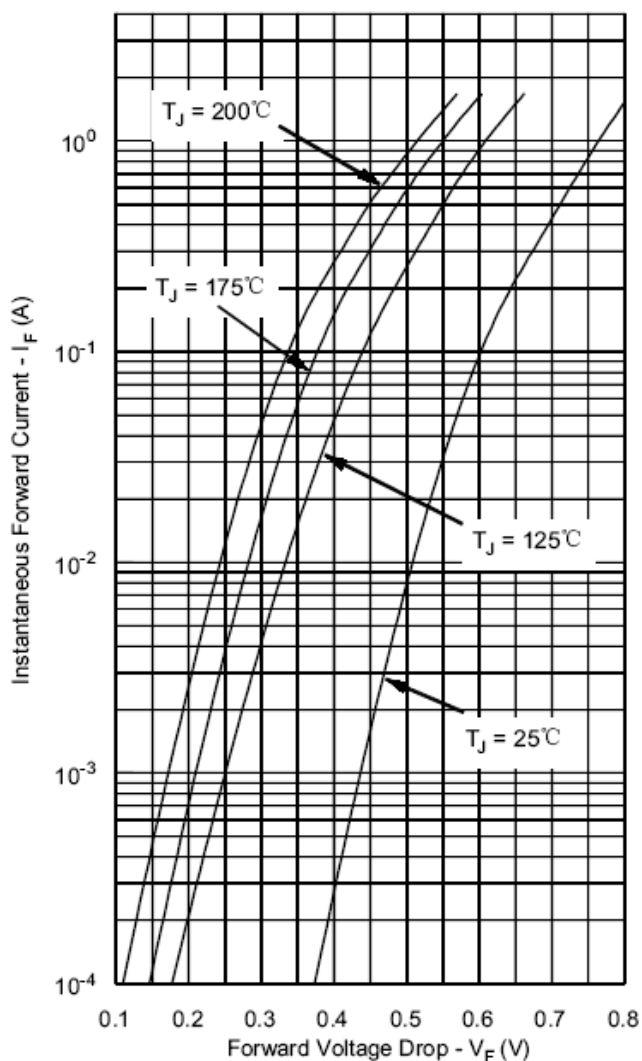
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 1 A, Pulse, T _J = 25 °C @ 1.5 A, Pulse, T _J = 25 °C	0.76 0.79	0.78 0.85	V
	V _{F2}	@ 1 A, Pulse, T _J = 125 °C @ 1.5A, Pulse, T _J = 125 °C	0.60 0.64	0.63 0.68	V
Reverse Current*	I _{R1}	@V _R = rated V _R , Pulse, T _J = 25 °C	0.00001	0.1	mA
	I _{R2}	@V _R = rated V _R , Pulse, T _J = 125 °C	0.009	1	mA
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	27	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 < 300μs, Duty Cycle < 2%

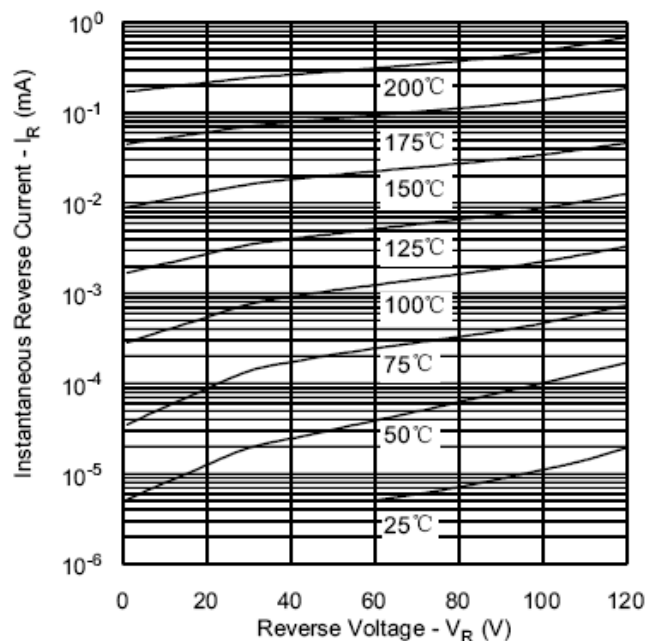
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T _J	-	-55 to +150	°C
Storage Temperature	T _{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Ambient	R _{θJA}	DC operation	80	°C/W
Approximate Weight	wt	-	0.06	g
Case Style	SMA			

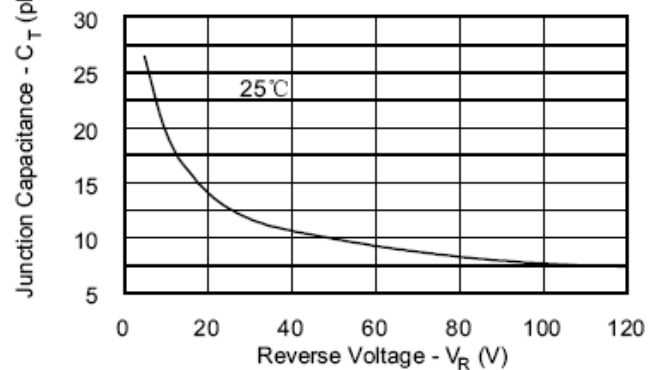
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance





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