

Technical Data
Data Sheet 3102, Rev. -

10MQ200N SCHOTTKY RECTIFIER

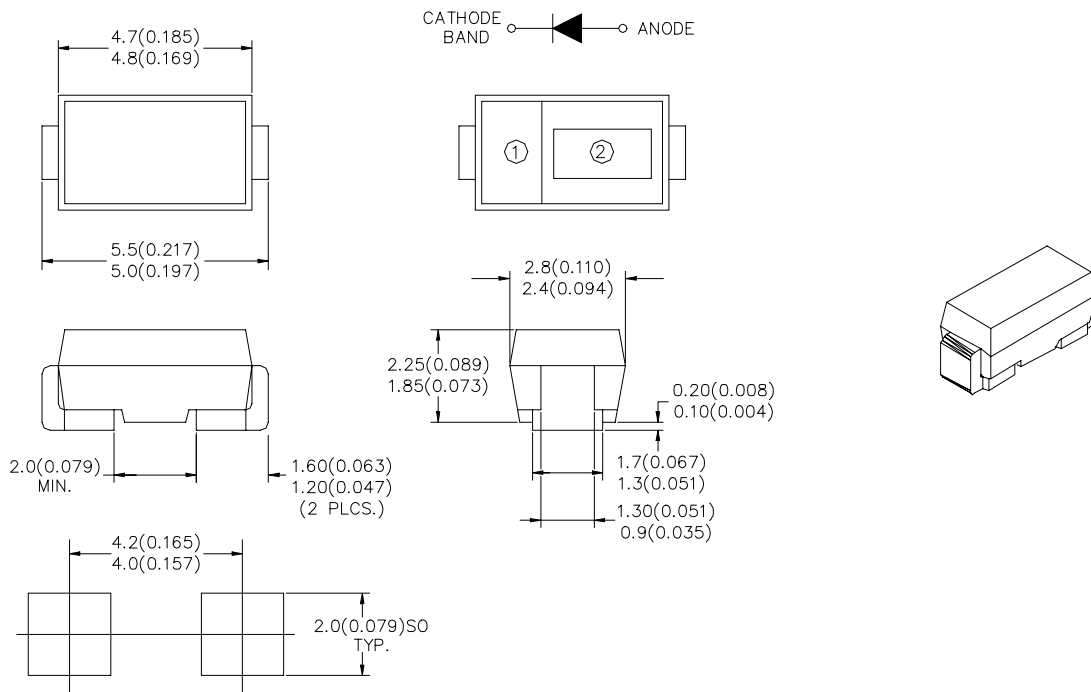
Applications:

- Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection
- Disk drives • Battery charging

Features:

- Small foot print, surface mountable
- Very low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability

Mechanical Dimensions: In Inches / mm



SMA

Data Sheet 3102, Rev. -

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	200	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 123\text{ }^\circ\text{C}$, rectangular wave form, On PC board 3 mm X 3 mm or 9 mm ² (.013mm thick copper pad area)	1.0	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	20	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop *	V_{F1}	@ 1 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.92	V
	V_{F2}	@ 1 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.76	V
Max. Reverse Current *	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	0.5	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	1.0	mA
Max. Junction Capacitance	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	20	pF
Typical Series Inductance	L_S	Measured lead to lead 5 mm from package body	2.0	nH
Max. Voltage Rate of Change (Rated V_R)	dv/dt	-	10,000	V/ μs

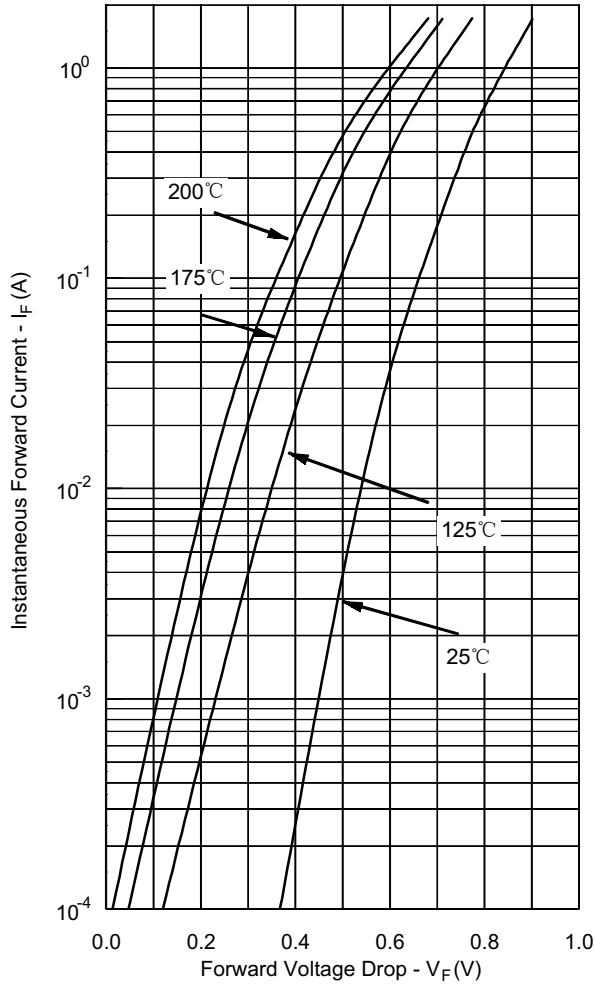
* Pulse Width < 300 μs , Duty Cycle <2%

Thermal-Mechanical Specifications:

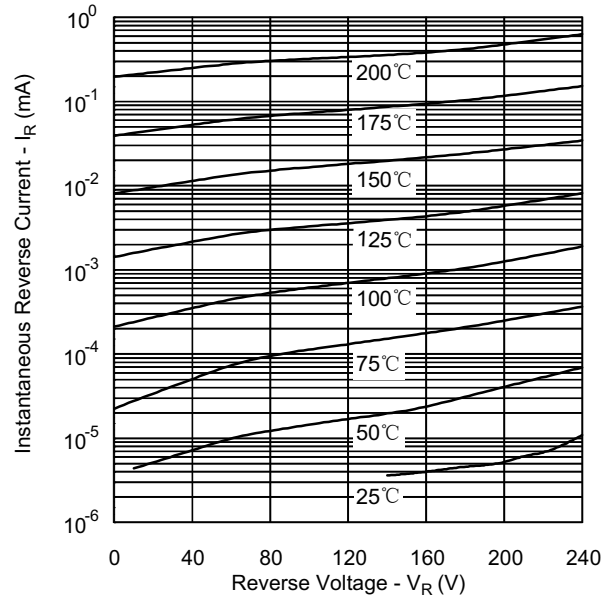
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-55 to +175	$^\circ\text{C}$
Max. Thermal Resistance, Junction to Lead	$R_{\theta JL}$	DC operation	80	$^\circ\text{C/W}$
Approximate Weight	wt	-	0.07	g
Case Style		SMA		

Data Sheet 3102, Rev. -

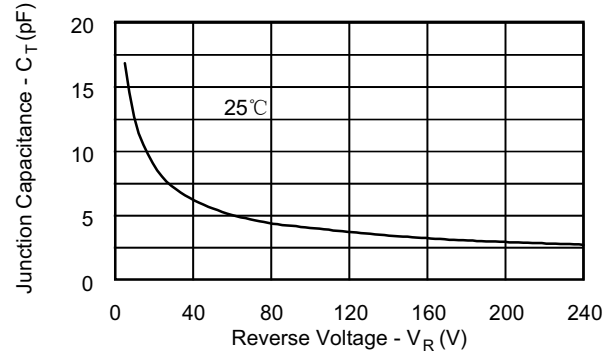
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



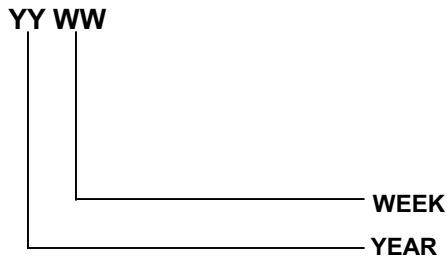
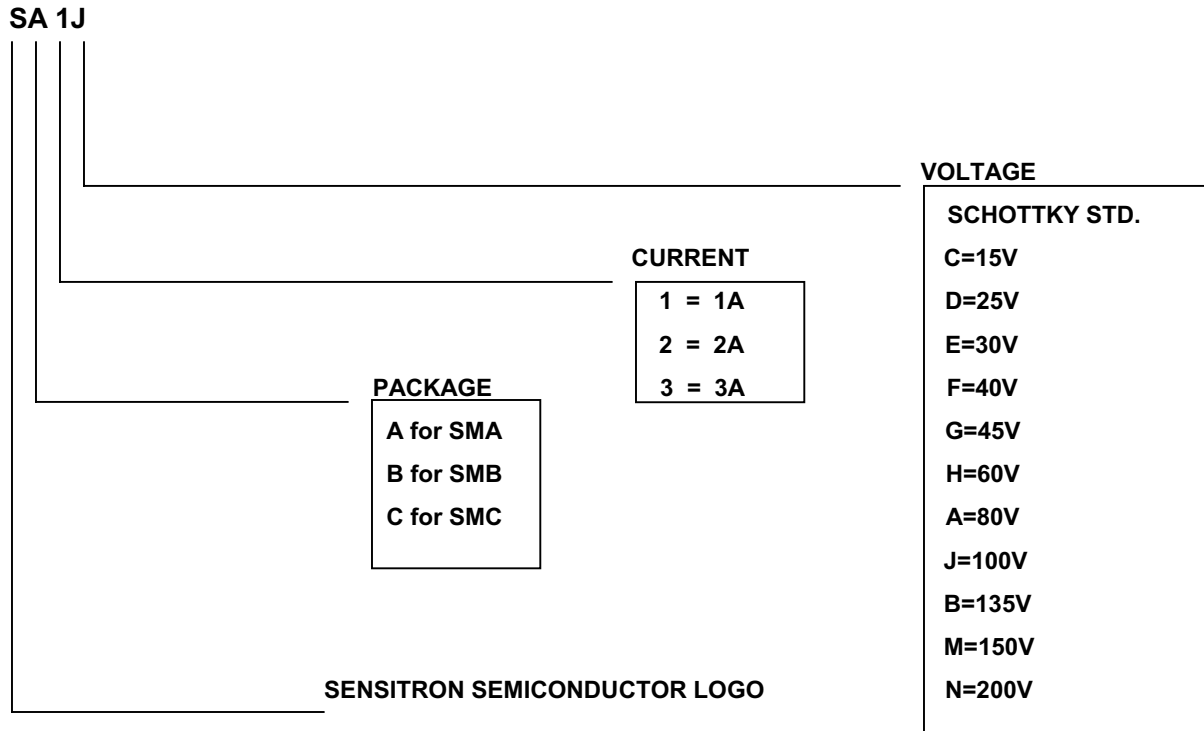
Data Sheet 3102, Rev. -

Marking & Identification

Each device has 2 rows of marking for identification.

The first row designates the device as manufactured by Sensitron Semiconductor as indicated by the letter "S". It also contains the information about package style, current and voltage rating.

The second row indicates the year and the week of manufacturing.



TECHNICAL DATA

DISCLAIMER:

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.