

**SCHOTTKY BARRIER SWITCHING DIODE**
**Features**

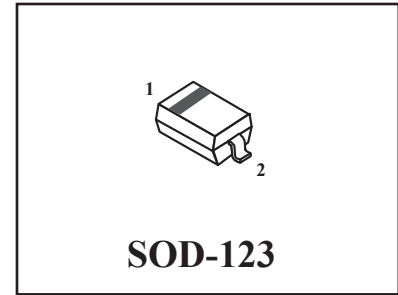
- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Reverse Capacitance
- Also Available in Lead Free Version
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

**Mechanical Data**

- Case: SOD-123, Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Polarity: Cathode Band
- Leads: Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish). Please See Ordering Information, Note 4, on Page 2
- Marking: Type Code only or Date Code and Type Code
- Type Codes:
 

LMSD103AT1G	S4
LMSD103BT1G	S5
LMSD103CT1G	S6
- Weight: 0.01 grams (approx.)

**LMSD103\*T1G**  
**S-LMSD103\*T1G**



Equivalent Circuit Diagram


**Maximum Ratings** @  $T_A = 25^\circ\text{C}$  unless otherwise specified

Characteristic	Symbol	LMSD103AT1G	LMSD103BT1G	LMSD103CT1G	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	40	30	20	V
Working Peak Reverse Voltage	$V_{RWM}$				
DC Blocking Voltage	$V_R$				
RMS Reverse Voltage	$V_{R(RMS)}$	28	21	14	V
Forward Continuous Current (Note 1)	$I_{FM}$	350			mA
Non-Repetitive Peak Forward Surge Current @ $t \leq 1.0s$	$I_{FSM}$	1.5			A
Power Dissipation (Note 1)	$P_d$	400			mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	300			$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +125			$^\circ\text{C}$

**Electrical Characteristics** @  $T_A = 25^\circ\text{C}$  unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	40 30 20	—	—	V	$I_R = 100\mu\text{A}$
Forward Voltage Drop (Note 2)	$V_{FM}$	—	—	0.37 0.60	V	$I_F = 20\text{mA}$ $I_F = 200\text{mA}$
Peak Reverse Current (Note 2)	$I_{RM}$	—	—	5.0	$\mu\text{A}$	$V_R = 30\text{V}$ $V_R = 20\text{V}$ $V_R = 10\text{V}$
Total Capacitance	$C_T$	—	28	—	pF	$V_R = 0\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	10	—	ns	$I_F = I_R = 200\text{mA}$ , $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

- Notes: 1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website  
 2. Short duration test pulse used to minimize self-heating effect.

# LMSD103\*T1G , S-LMSD103\*T1G

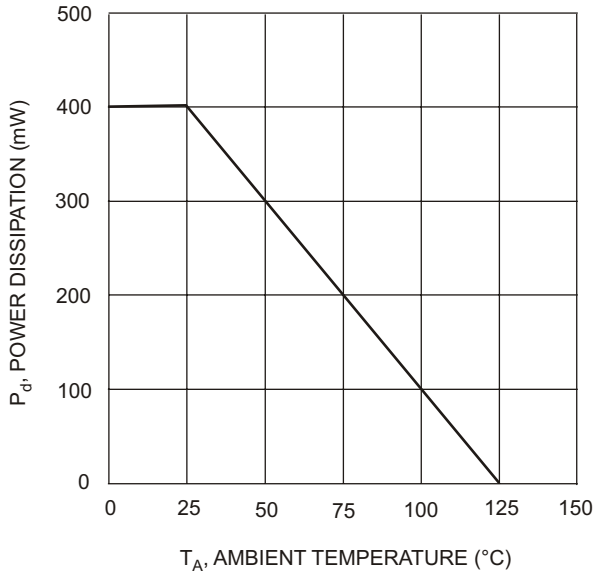


Fig.1 Power Derating Curve

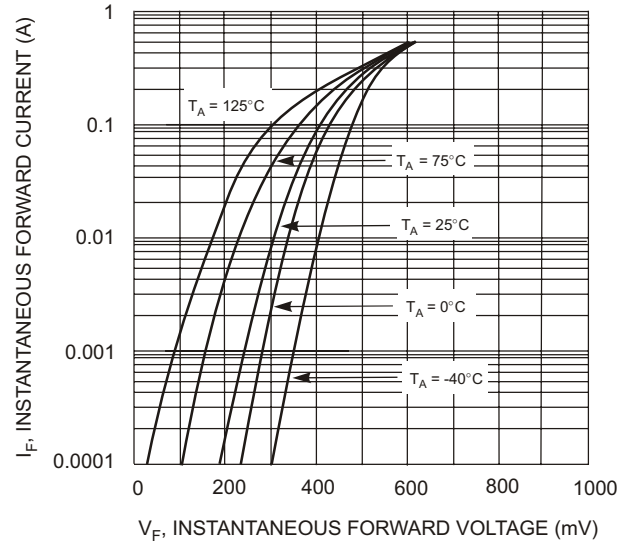


Fig. 2 Typical Forward Characteristics

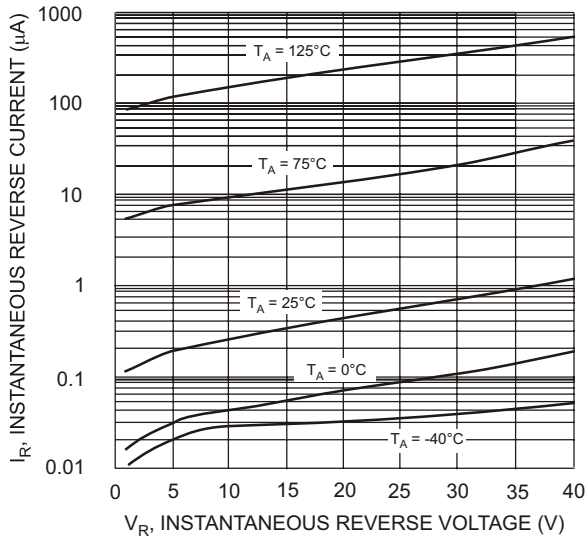


Fig. 3 Typical Reverse Characteristics

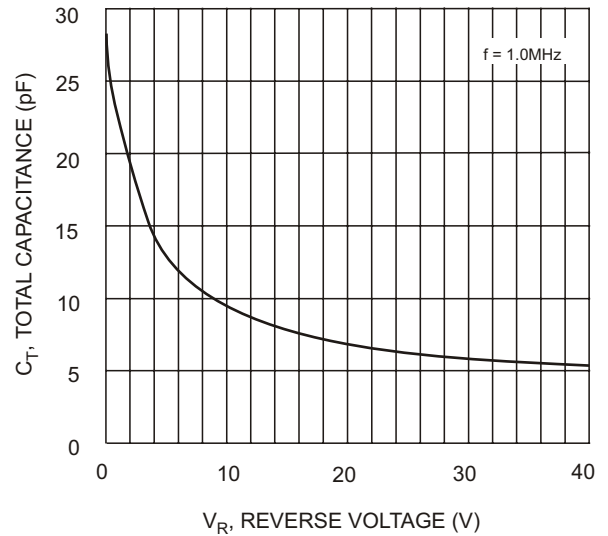
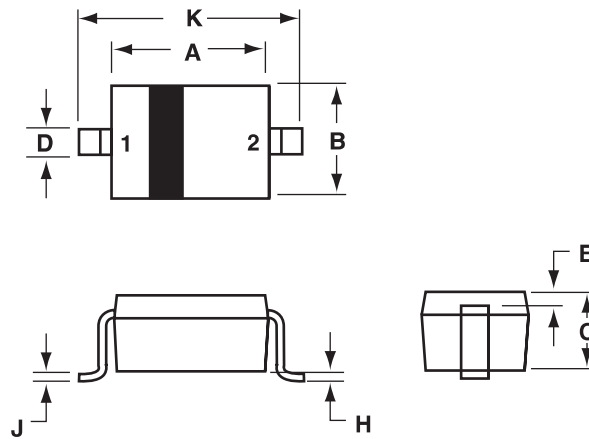


Fig. 4 Typ. Total Capacitance vs. Reverse Voltage

# LMSD103\*T1G , S-LMSD103\*T1G

## SOD-123 Outline Dimensions

Unit:mm



SOD-123		
Dim	Min	Max
A	2.55	2.85
B	1.40	1.80
C	0.95	1.35
D	0.50	0.70
E	0.30 REF	
H	-	0.10
J	-	0.15
K	3.55	3.85

PIN 1. CATHODE  
2. ANODE