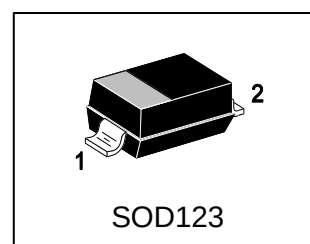


S-LMSZ5231BT1G

Zener Voltage Regulators

300 mW SOD-123 Surface Mount



1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
- 300 mW Rating on FR-4 Board
- ESD rating of class 3 per human body model
- Package designed for optimal automated board assembly
- Small package size for high density applications
- General purpose, medium current
- ESD rating of Class 3 (>16 kV) per Human Body Model

2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S-LMSZ5231BT1G	E1	3000/Tape&Reel
S-LMSZ5231BT3G	E1	10000/Tape&Reel

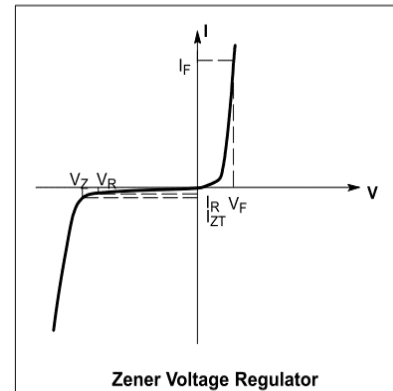
3. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Power Dissipation on FR-4 Board(Note 1)	PD	300	mW
Thermal Resistance, Junction to Ambient(Note 1)	R _{θJA}	440	°C/W
Junction to Case	R _{θJC}	200	°C/W
Junction and Storage temperature	T _J ,T _{stg}	-55~+150	°C

1. Device mounted on an FR-4 PCB, single-sided copper, tin-plated and standard footprint.

4. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Symbol	Parameter
VZ	Reverse Zener Voltage @ IZT
IZT	Reverse Current
ZZT	Maximum Zener Impedance @ IZT
IZK	Reverse Current
ZZK	Maximum Zener Impedance @ IZK
IR	Reverse Leakage Current @ VR
VR	Reverse Voltage
IF	Forward Current
VF	Forward Voltage @ IF

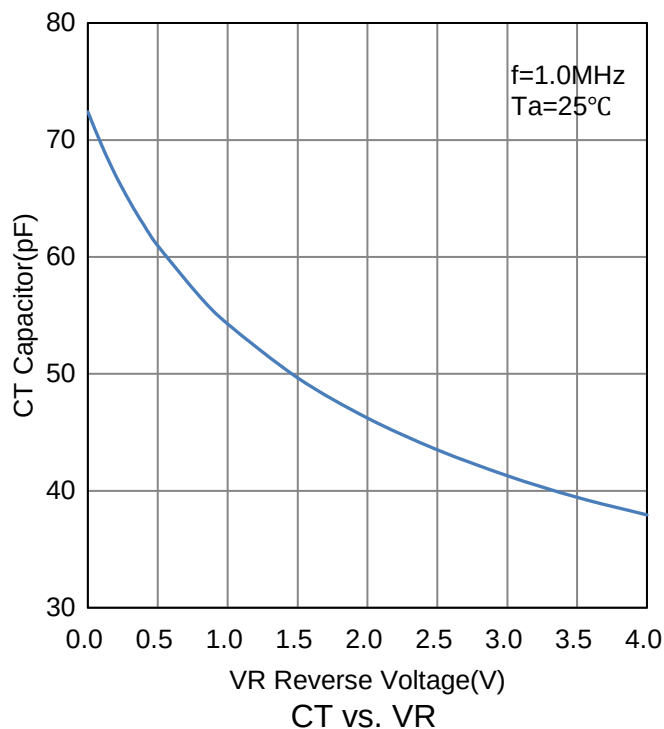
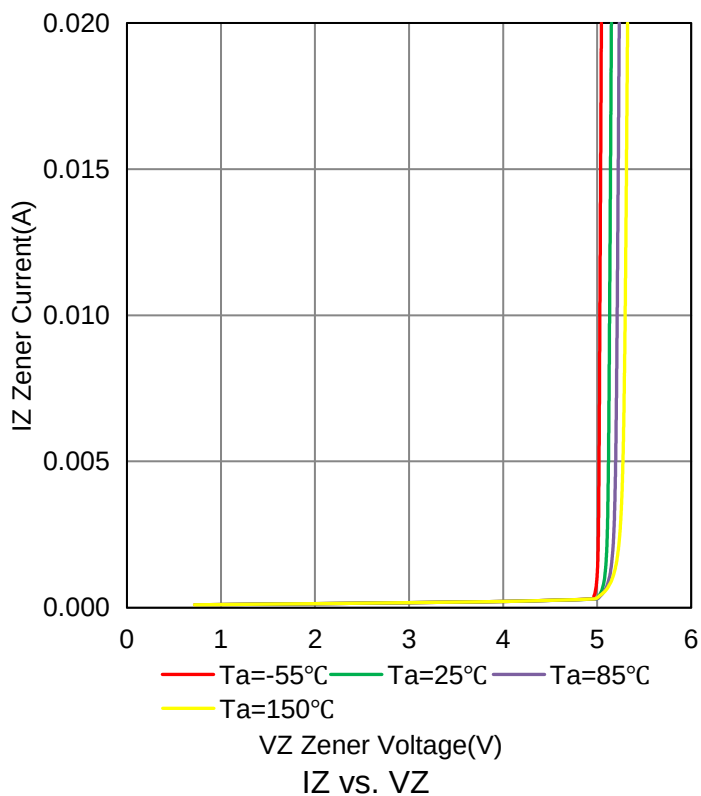
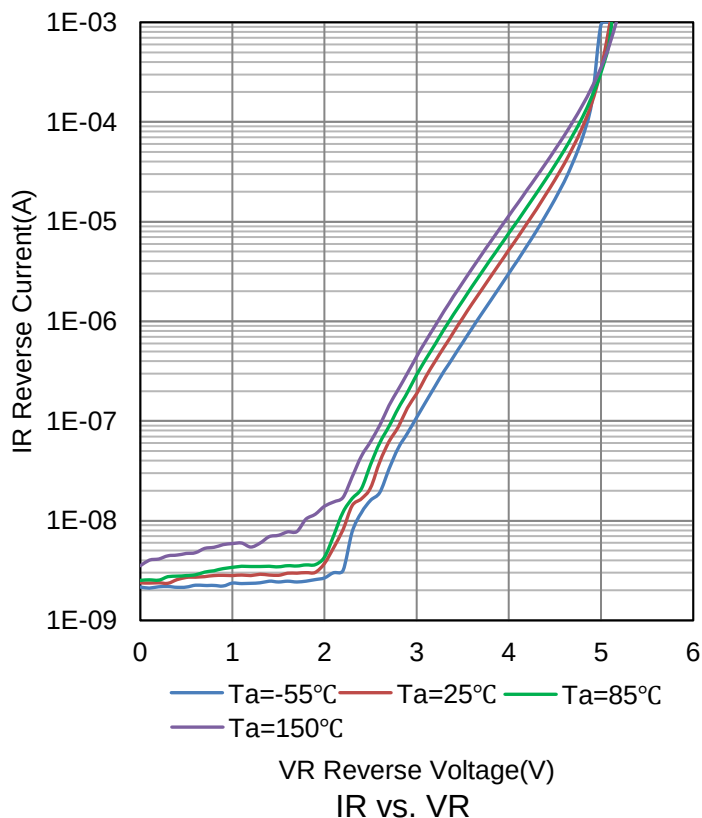
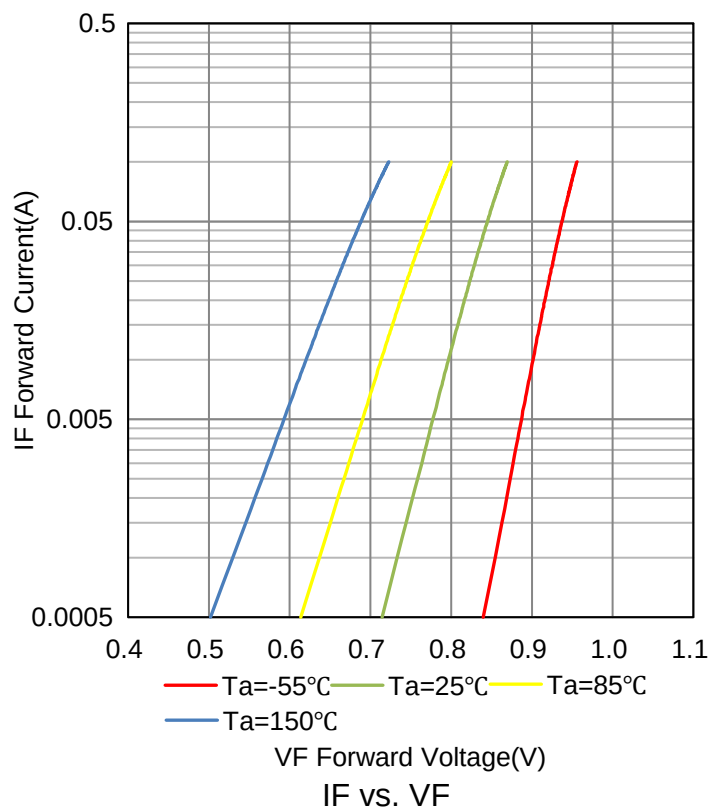


5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage (IF=10 mA)	VF	-	-	0.9	V
Zener voltage(Note 2 and 3) (IZT=20mA)	VZ	4.85	5.1	5.36	V
Operating resistance(Note 4) (IZT=20mA)	ZZT	-	-	17	Ω
Rising operating resistance(Note 4) (IZK=0.25mA)	ZZK	-	-	1600	Ω
Reverse current (VR=2.0V)	IR	-	-	5	μA

- The type numbers shown have a standard tolerance of $\pm 5\%$ on the nominal Zener voltage.
- Nominal Zener voltage is measured with the device junction in thermal equilibrium at $T_L = 30^\circ\text{C} \pm 1^\circ\text{C}$.
- ZZT and ZZK are measured by dividing the AC voltage drop across the device by the ac current applied. The specified limits are for $I_Z(\text{AC}) = 0.1 I_Z(\text{dc})$ with the AC frequency = 1 KHz.

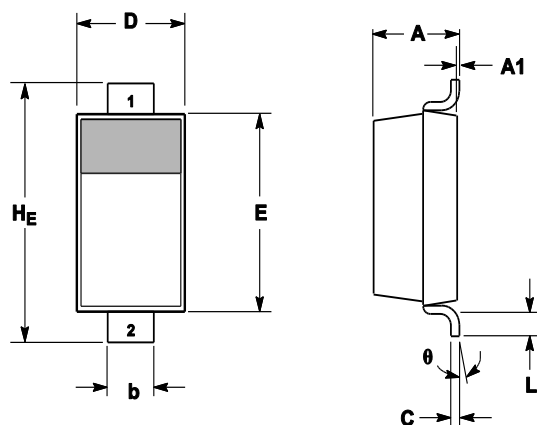
6. ELECTRICAL CHARACTERISTICS CURVES



7.OUTLINE AND DIMENSIONS

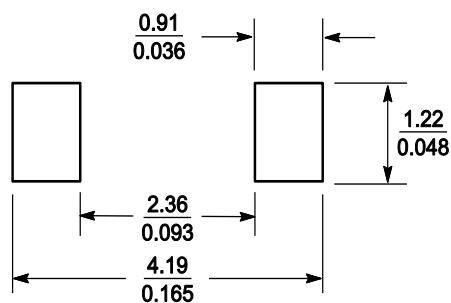
Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.94	1.17	1.35	0.037	0.046	0.053
A1	0.00	0.05	0.10	0.000	0.002	0.004
b	0.51	0.61	0.71	0.020	0.024	0.028
c	---	---	0.15	---	---	0.006
D	1.40	1.60	1.80	0.055	0.063	0.071
E	2.54	2.69	2.84	0.100	0.106	0.112
H _E	3.56	3.68	3.86	0.140	0.145	0.152
L	0.25	---	---	0.010	---	---
θ	0°	---	10°	0°	---	10°

8.SOLDERING FOOTPRINT



SCALE 10:1 (mm inches)

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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