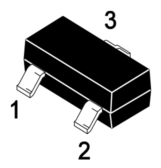
Zener Voltage Regulator

MMBZ5231BLT1G

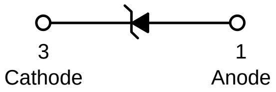
Product code: 10.28.00.6430

1. FEATURES

- 225 mW Rating on FR–4 or FR–5 Board.
- Small Package Size for High Density Applications.
- ESD Rating of Class 3 (>8 KV) per Human Body Model.
- 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.

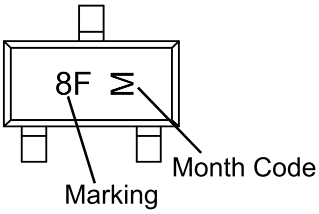


SOT23(TO-236)



2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
MMBZ5231BLT1G	8F	3000/Tape&Reel



3. THERMAL CHARACTERISTICS

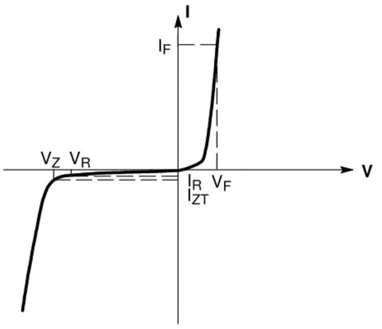
Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR−5 Board (Note 1) @ TA = 25ºC Derate above 25ºC	PD	225 1.8	mW mW/ºC
Thermal Resistance Junction–to–Ambient	RΘJA	556	ºC/W
Total Device Dissipation, Alumina Substrate (Note 2) @ TA = 25°C Derate above 25ºC	PD	300 2.4	mW mW/ºC
Thermal Resistance Junction–to–Ambient	RΘJA	417	ºC/W
Junction and Storage temperature	TJ,Tstg	−65～+150	° C

1.FR–5 = 1.0 × 0.75 × 0.062 in.

2.Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.

4. ELECTRICAL CHARACTERISTICS (Ta= 25ºC)(VF = 0.95 V Max. @ IF = 10 mA)

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



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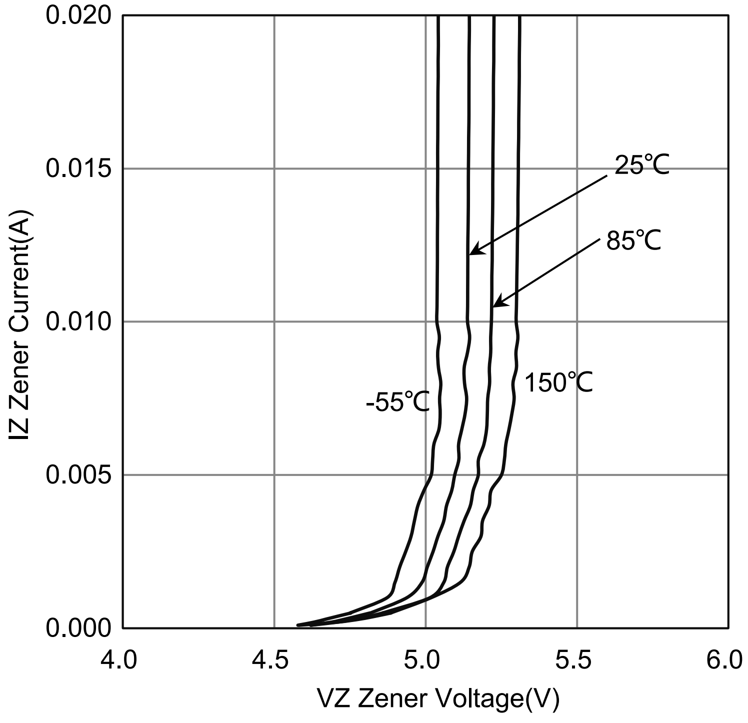
5. ELECTRICAL CHARACTERISTICS (Ta= 25ºC)

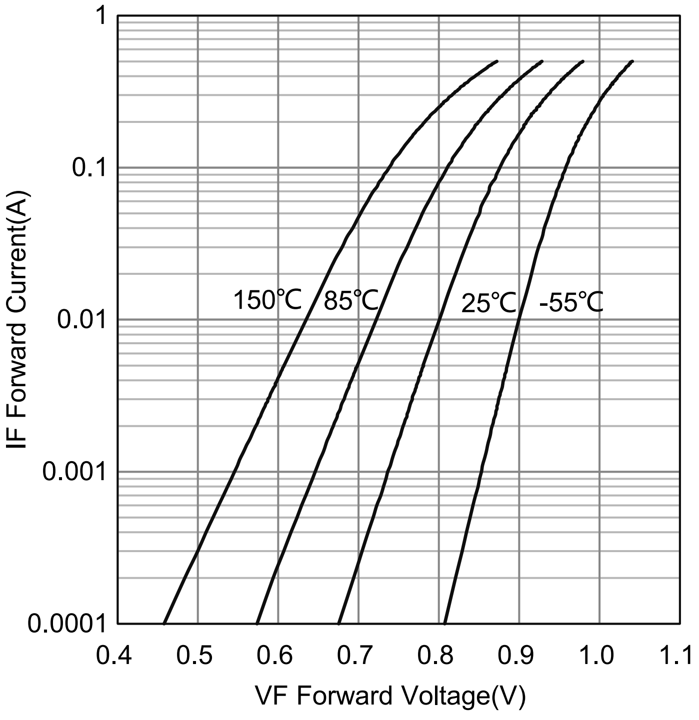
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Zener Voltage(Note 3) (IZT= 20 mA)	VZ	4.84	5.1	5.36	V
Zener Impedance (IZT =20mA)	ZZT	-	-	17	Ω
Zener Impedance (IZK=0.25mA)	ZZK	-	-	1600	Ω
Leakage Current (VR=2V)	IR	-	-	5	μA

3.Zener voltage is measured with a pulse test current IZ at an ambient temperature of 25°C.

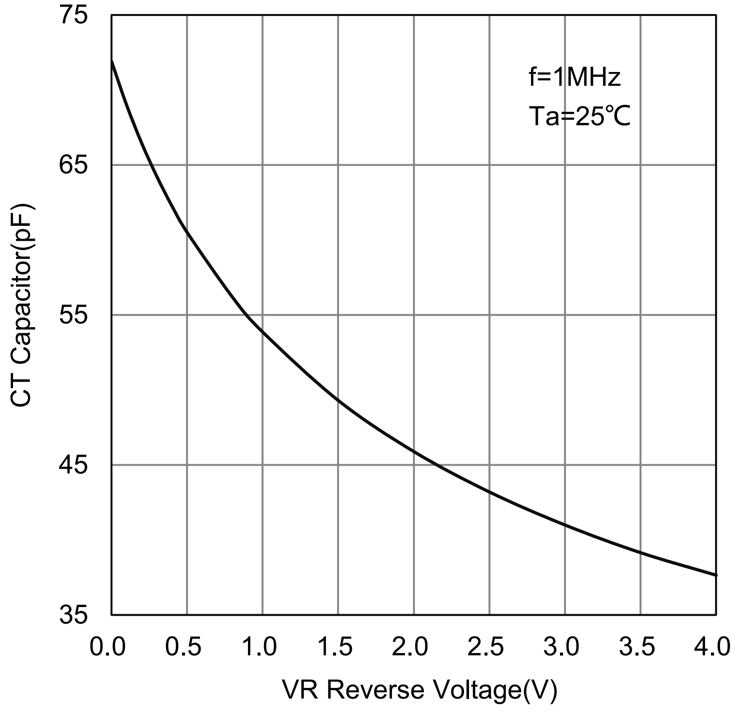
6.ELECTRICAL CHARACTERISTICS CURVES



IZ vs. VZ

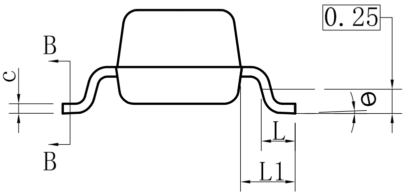


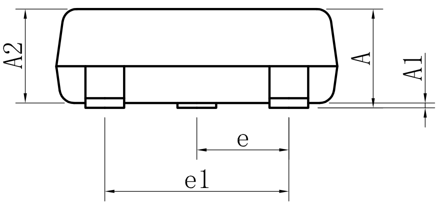
IF vs. VF

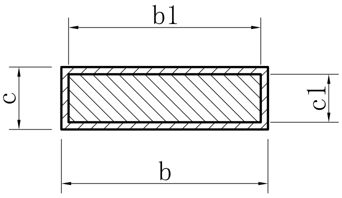


CT vs. VR

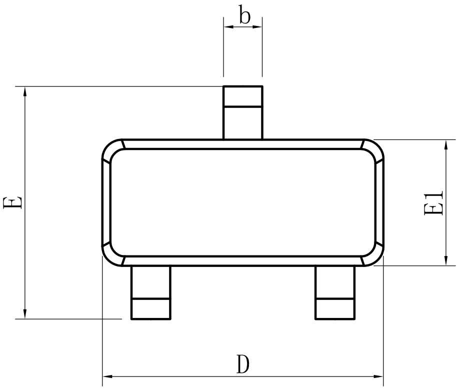
7.OUTLINE AND DIMENSIONS







SECTION B-B

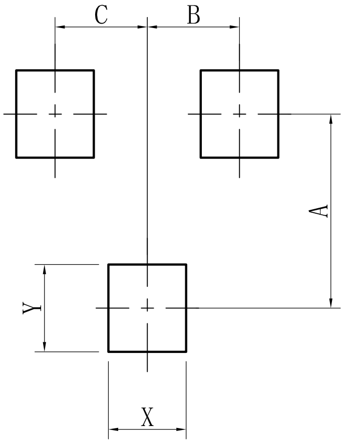


SOT23			
DIM	MIN	NOR	MAX
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.50
b1	0.30	0.40	0.45
c	0.08	-	0.20
c1	0.08	0.10	0.16
D	2.80	2.90	3.04
E	2.10	-	2.64
E1	1.20	1.30	1.40
e	0.95BSC		
e1	1.90BSC		
L	0.40	0.46	0.60
L1	0.54REF		
θ	0°	-	8°
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish Ra0.4±0.2um
2. Bottom package surface finish Ra0.7±0.2um
3. Side package surface finish Ra0.4±0.2um

8.SOLDERING FOOTPRINT



SOT-23	
DIM	(mm)
X	0.80
Y	0.90
A	2.00
B	0.95
C	0.95