Surface Mount Zener Diodes

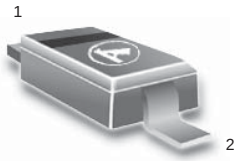
LUDZS5.1MBT1G Series
S-LUDZS5.1MBT1G Series

Features:

*400mw Power Dissipation
*Ideal for Surface Mountted Application
*Zener Breakdown Voltage Range 3.6V to 36V
*Pb-Free package is available
*S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

Mechanical Data:

*Case : SOD-323 Molded plastic
*Polarity: Cathode Indicated by Polarity Band
*Marking: Marking Code (See Specific marking table)
*Package Weight: 4.51 mg/unit



SOD– 323

Equivalent Circuit Diagram



Cathode Anode

Maximum Ratings and Electrical Characteristics (TA=25 °C Unless Otherwise Noted)

Characteristics	Symbol	Value	Unit
Power Dissipation	PD	400	mW
Thermal Resistance from Junction to Ambient	$R_{\theta}JA$	312	°C/W
Junction and Storage Temperature Range	Tj,TSTG	-55 to +150	°C

Device Marking Code

Device	Marking	Device	Marking
LUDZS3.6MBT1G	B6	LUDZS12MBT1G	BU
LUDZS3.9MBT1G	B7	LUDZS13MBT1G	BV
LUDZS4.3MBT1G	BT	LUDZS15MBT1G	BW
LUDZS4.7MBT1G	B9	LUDZS16MBT1G	B5
LUDZS5.1MBT1G	BA	LUDZS18MBT1G	BD
LUDZS5.6MBT1G	BC	LUDZS20MBT1G	BG
LUDZS6.2MBT1G	BE	LUDZS22MBT1G	BK
LUDZS6.8MBT1G	BF	LUDZS24MBT1G	BM
LUDZS7.5MBT1G	BH	LUDZS27MBT1G	BN
LUDZS8.2MBT1G	BJ	LUDZS30MBT1G	BP
LUDZS9.1MBT1G	BL	LUDZS33MBT1G	BR
LUDZS10MBT1G	B0	LUDZS36MBT1G	BS
LUDZS11MBT1G	B1	-	-

Ratings and Characteristic curves

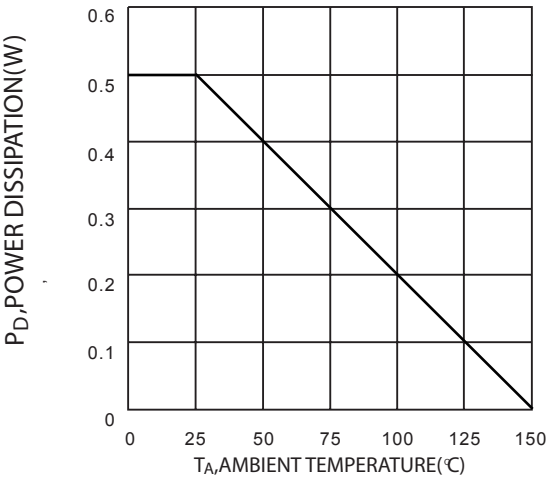


FIG. 1 Power Disspation vs Ambient temperaute

LUDZS5.1MBT1G Series , S-LUDZS5.1MBT1G Series

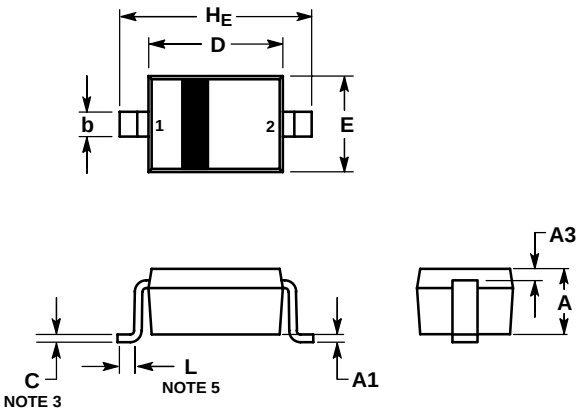
Electrical Characteristics (T_A=25°C unless otherwise noted, V_F=0.9V Max@ I_F=10mA)

Device	Zener voltage			Operating resistance		Rising operating resistance		Reverse curre	
	V_Z(V)			Z_Z(Ω)		Z_{Zk}(Ω)		I_R(μA)	
	Min.	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	V_R (V)
LUDZS3.6MBT1G	3.530	3.670	5	85	5	600	1.0	2	1.0
LUDZS3.9MBT1G	3.820	3.980	5	85	5	600	1.0	2	1.0
LUDZS4.3MBT1G	4.210	4.390	5	80	5	600	1.0	1	1.0
LUDZS4.7MBT1G	4.610	4.790	5	70	5	500	1.0	0.5	1.0
LUDZS5.1MBT1G	5.000	5.200	5	50	5	480	1.0	0.1	1.0
LUDZS5.6MBT1G	5.490	5.710	5	30	5	400	1.0	0.1	1.0
LUDZS6.2MBT1G	6.080	6.320	5	10	5	150	1.0	0.1	2.0
LUDZS6.8MBT1G	6.660	6.940	5	8	5	80	1.0	0.1	3.0
LUDZS7.5MBT1G	7.350	7.650	5	7	5	50	1.0	0.1	5.0
LUDZS8.2MBT1G	8.040	8.360	5	7	5	50	1.0	0.1	6.1
LUDZS9.1MBT1G	8.920	9.280	5	10	5	50	1.0	0.1	6.8
LUDZS10MBT1G	9.800	10.200	5	15	5	70	1.0	0.1	7.5
LUDZS11MBT1G	10.780	11.220	5	20	5	70	1.0	0.1	8.2
LUDZS12MBT1G	11.760	12.240	5	20	5	90	1.0	0.1	9.0
LUDZS13MBT1G	12.740	13.260	5	26	5	110	1.0	0.1	9.7
LUDZS15MBT1G	14.700	15.300	5	30	5	110	1.0	0.1	11
LUDZS16MBT1G	15.680	16.320	5	40	5	170	1.0	0.1	12
LUDZS18MBT1G	17.640	18.360	5	45	5	170	1.0	0.1	14
LUDZS20MBT1G	19.600	20.400	5	55	5	220	1.0	0.1	15
LUDZS22MBT1G	21.560	22.440	5	55	5	220	1.0	0.1	17
LUDZS24MBT1G	23.520	24.480	5	70	5	220	1.0	0.1	18
LUDZS27MBT1G	26.460	27.540	5	80	5	220	1.0	0.05	20
LUDZS30MBT1G	29.400	30.600	5	80	5	220	1.0	0.1	22
LUDZS33MBT1G	32.340	33.660	5	80	5	220	1.0	0.1	24
LUDZS36MBT1G	35.280	36.720	5	80	5	220	1.0	0.1	27

Notes) 1. The Zener voltage (V_Z) is measured 40ms after power is supplied.
2. The operating resistances (Z_Z, Z_{Zk}) are measured by superimposing a minute alternating current on the regulated current (I_Z).

LUDZS5.1MBT1G Series , S-LUDZS5.1MBT1G Series

SOD–323



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3		0.15 REF			0.006 REF	
b	0.25	0.32	0.4	0.010	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
H_E	2.30	2.50	2.70	0.090	0.098	0.105

SOLDERING FOOTPRINT*

