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CMTLSD323Z100AFE

Transient Voltage Suppressors for ESD

◆ DESCRIPTION

The CMTLSD323Z100AFE is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

This device has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE(Cable Discharge Events),and EFT (electrical fast transients).

◆ FEATURES

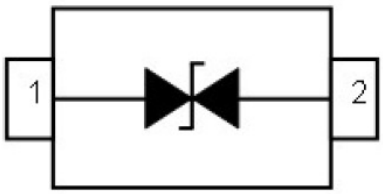
1、IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
2、IEC61000-4-4 (EFT) 40A (5/50 η s)
3、Peak power dissipation: 200W (8/20 μ s)
4、Protects one directional I/O line
5、Low clamping voltage
6、Working voltages : 5V
7、Low leakage current

◆ Applications

1、High Speed Line :USB1.0/2.0, VGA, DVI, SDI,
2、Serial and Parallel Ports
3、Notebooks, Desktops, Servers
4、Projection TV
5、Cellular handsets and accessories
6、Portable instrumentation
7、Peripherals

◆ SOD-323

◆ Pin Configuration



◆ MECHANICAL CHARACTERISTICS

1、JEDEC SOD-323 Package
2、Molding Compound Flammability Rating : UL 94V-O
3、Weight 5 Millgrams (Approximate)
4、Quantity Per Reel : 3,000pcs
5、Reel Size : 7 inch
6、Lead Finish : Lead Free

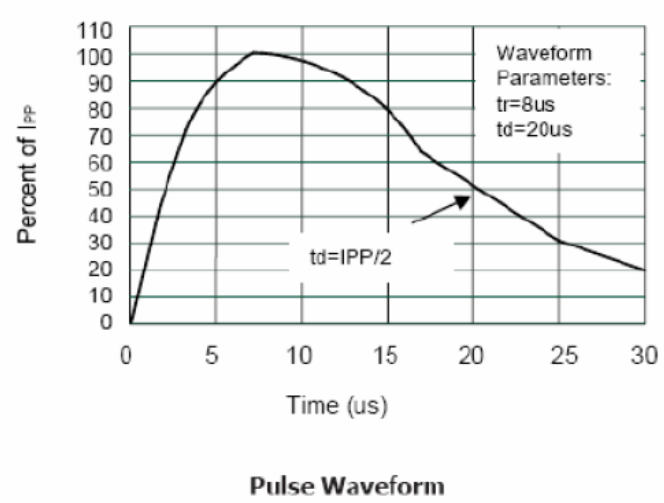
◆ MAXIMUM RATINGS (@ 25℃ Unless Otherwise Specified)

Symbol	Parameter	Value	Units
VESD	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±15 ±8	KV
P_{PP}	Peak Pulse Power (tp=8/20μs waveform)	100	Watts
T_L	Lead Soldering Temperature	260 (10 sec.)	℃
T_J	Operating Temperature Range	-55 ~ 150	℃
T_{STG}	Storage Temperature Range	-55 ~ 150	℃

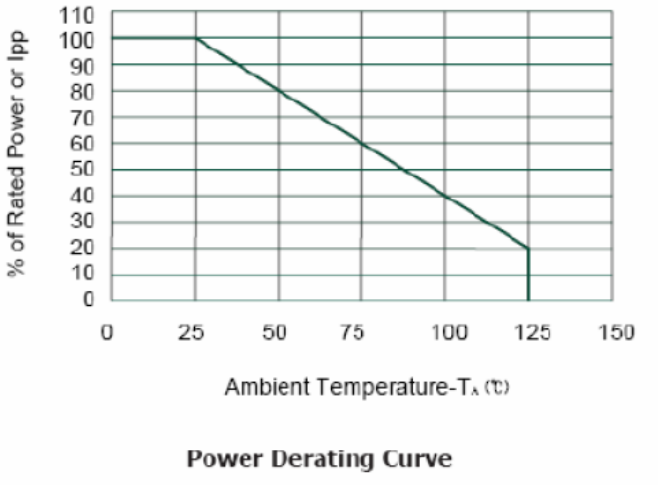
◆ ELECTRICAL CHARACTERISTICS（Tamb=25°C）

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V_{RWM}	Any I/O pin to GND			5	V
Reverse Breakdown Voltage	V_{BR}	Any I/O pin to GND I_t =1mA	5.6		7.8	V
Reverse Leakage Current	I_R	V_{RWM} =5V； T=25°C Any I/O pin to GND			1	μA
Positive Clamping Voltage	V_{C1}	I_{pp}=5A，t_P=8/20μS； Positive pulse; Any I/O pin to GND			11.6	V
Negative Clamping Voltage	V_{C2}	I_{PP}=8A，t_P=8/20μS； Positive pulse; Any I/O pin to GND			16.0	V
Junction Capacitance Between I/O And GND	C_J	V_R=0V，f=1MHz； Any I/O pin to GND		10	15	pF

◆ TYPICAL ELECTRICAL CHARACTERISTICS CURVE



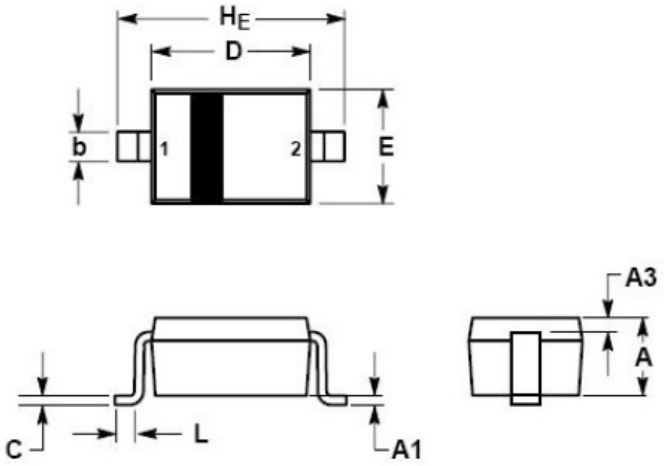
Pulse Waveform



Power Derating Curve

◆ PACKAGE OUTLINE

SOD-323



DIM	MILLIMETERS			INCHES		
	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