

Bidirectional TVS Diodes

◆ DESCRIPTION

The CMTLSD323S Series is designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

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

◆ Applications

- 1、Cell Phone Handsets and Accessories
- 2、Microprocessor based equipment
- 3、Personal Digital Assistants (PDA's)
- 4、Notebooks, Desktops, and Servers
- 5、Portable Instrumentation
- 6、Networking and Telecom
- 7、Serial and Parallel Ports.
- 8、Peripherals

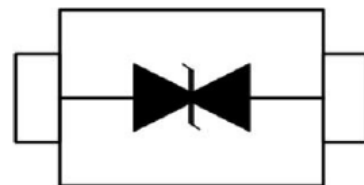
◆ FEATURES

- 1、350 Watts Peak Pulse Power per ($t_p=8/20\mu s$)
- 2、Protects one I/O line (bidirectional)
- 3、Low clamping voltage
- 4、Working voltages :3V,5V,8V,12V,15V,18V, 24V,36V
- 5、Low leakage current

◆ SOD-323



◆ Pin Configuration



◆ MECHANICAL CHARACTERISTICS

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

◆ IEC COMPATIBILITY

- 1、IEC61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact)
- 2、IEC61000-4-4 (EFT) 40A (5/50 μs)
- 3、IEC61000-4-5 (Lightning) 24A (8/20 μs)

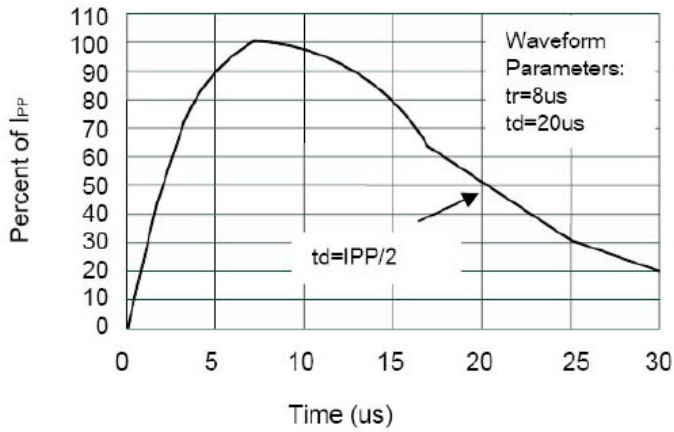
◆ **MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)**

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	± 15 ± 8	KV
P_{pp}	Peak Pulse Power(8/20 μ s)	350	W
T_{OPT}	Operating Temperature Range	-55 ~ 150	°C
T_{STG}	Storage Temperature Range	-55 ~ 150	°C
T_L	Lead Soldering Temperature	260(10 sec)	°C

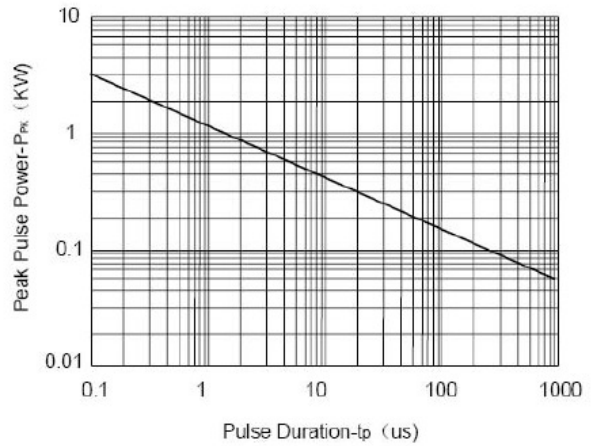
◆ **ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)**

PART NUMBER	V_{RWM}	V_B	I_T	V_C	V_C		I_R	C_T
	(V) (max.)	(V) (min.)	(mA)	@1A(max.)	(max.)	(@A)	(μ A) (max.)	(pF) (typ.)
CMTLSD323S03C351BFE	3.3	4.0	1	6.5	10.9	20	40	350
CMTLSD323S05C151BFE	5.0	6.0	1	9.8	18.0	17	10	150
CMTLSD323S08C101BFE	8.0	8.5	1	13.4	24.0	15	2	100
CMTLSD323S12C650BFE	12.0	13.3	1	19.0	32.0	11	1	65
CMTLSD323S15C550BFE	15.0	16.7	1	24.0	38.0	10	1	55
CMTLSD323S18C470BFE	18.0	20.0	1	29.0	45.0	9	1	47
CMTLSD323S24C350BFE	24.0	26.7	1	43.0	52.0	7	1	35
CMTLSD323S36C250BFE	36.0	40.0	1	60.0	75.0	5	1	25

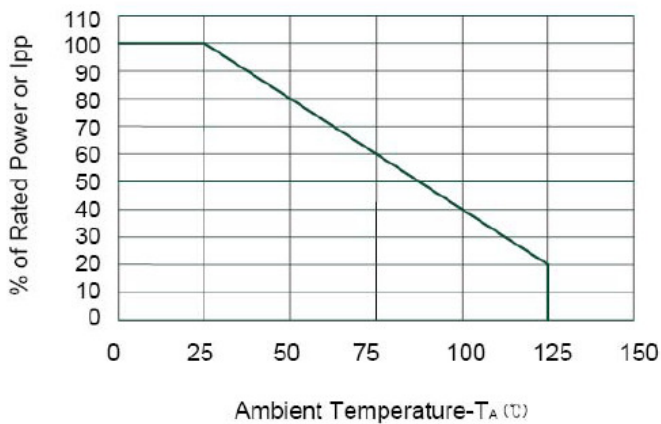
◆ TYPICAL ELECTRICAL CHARACTERISTICS CURVE



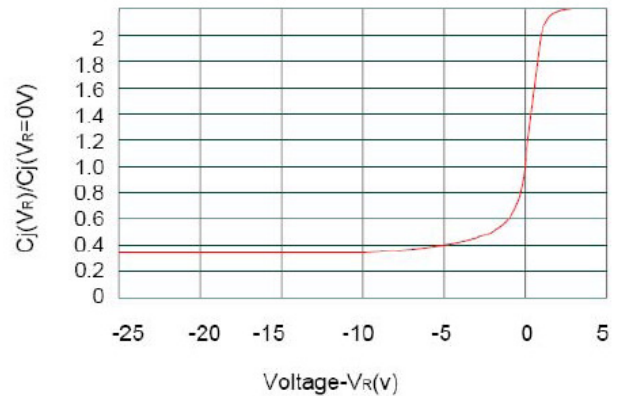
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



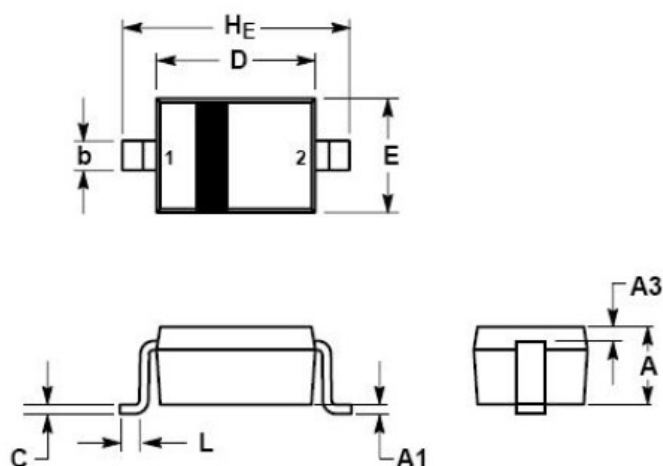
Power Derating Curve



Junction Capacitance vs. Reverse Voltage

◆ 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

