

BI-DIRECTIONAL TRANSIENT VOLTAGE SUPPRESSING DIODES

◆ DESCRIPTIONS

The CMTLS523C150ALE is a Bi-directional transient voltage Suppressing diodes to protect one power line, or one control line, or one low speed data line from overvoltage hazard of Electrostatic Discharge(ESD), Electrical Fast Transients(EFT) and Lightning.

The CMTLS523C150ALE`S typical applications are Computer Interfaces Protection, Microprocessors Protection, Control Signal Lines Protection etc.



◆ FEATURES

- 1、 Bi-directional TVS;
- 2、 Provides ESD protection to IEC61000-4-2 level 4:
±15kV (air discharge);
±8kV (contact discharge);
- 3、 Ultra-small body with SOD-523 package;
- 4、 Fast response speed <1 ns;
- 5、 Low clamping voltage;
- 6、 Low operating voltage;
- 7、 RoHS compliant.

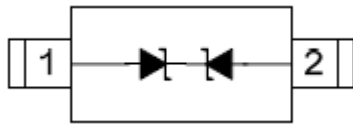
◆ APPLICATIONS

- 1、 Computer Interfaces Protection;
- 2、 Microprocessors Protection;
- 3、 Control Signal Lines Protection;
- 4、 Serial and Parallel Ports Protection;
- 5、 power lines on PCB Protection;
- 6、 Latchup Protection.

◆ ORDERING INFORMATION

Part No.	Package	Material	Packing
CMTLS523C150ALE	SOD-523	Halogen free	Tape

◆ PIN CONFIGURATION



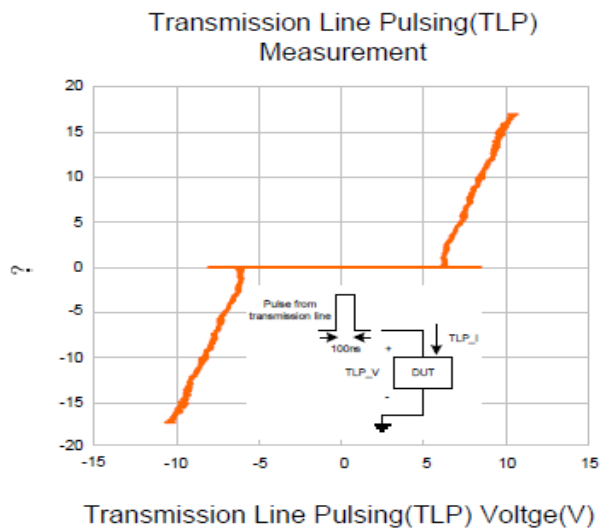
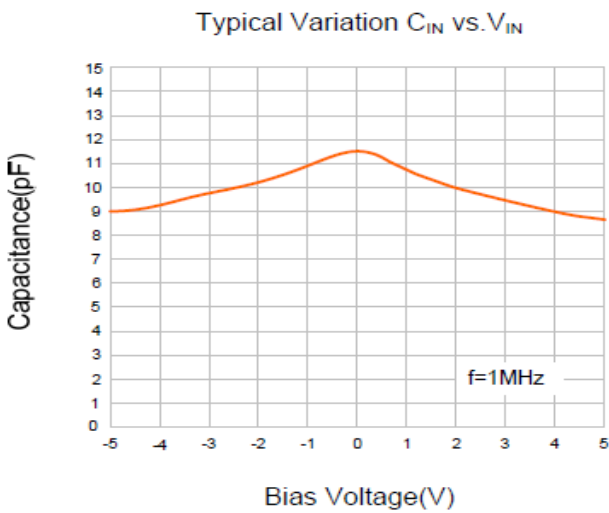
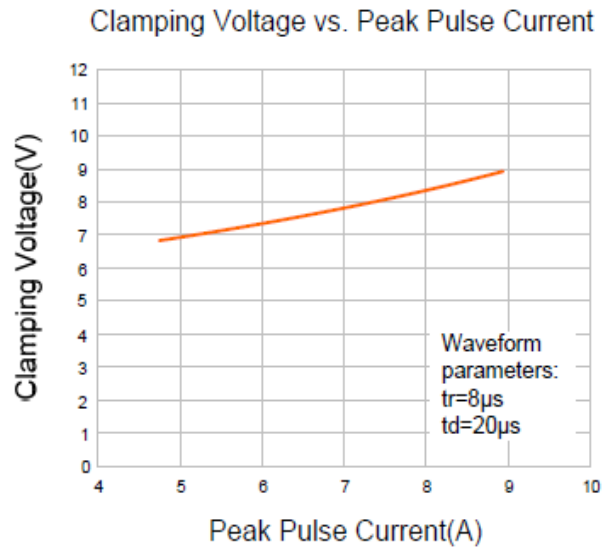
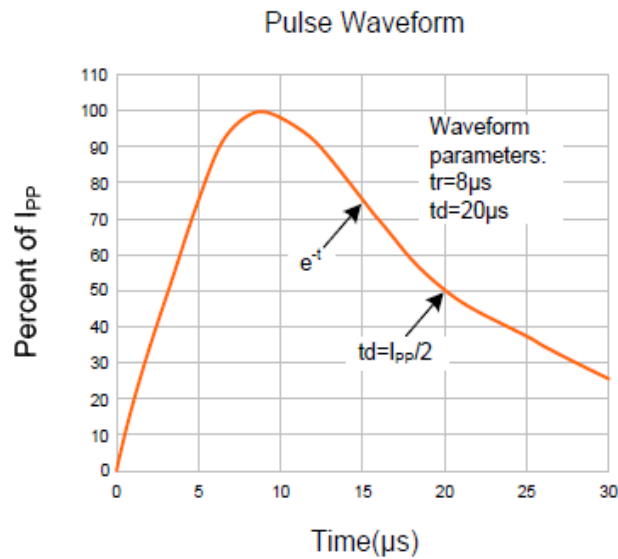
◆ ABSOLUTE MAXIMUM RATINGS

Characteristics	Symbol	Rating	Unit
Peak Pulse Current (8/20 μ s)	I_{PP}	8.5	A
Operating Supply Voltage	V_{DC}	6	V
ESD Per IEC61000-4-2 (air discharge)	V_{ESD1}	± 15 kV	kV
ESD Per IEC61000-4-2 (contact discharge)	V_{ESD2}	± 8 kV	kV
Lead Soldering Temperature	T_{SOL}	260(10sec.)	$^{\circ}$ C
Operating Temperature	T_{OP}	-55 ~ +125	$^{\circ}$ C
Storage Temperature	T_{STO}	-55 ~ +150	$^{\circ}$ C

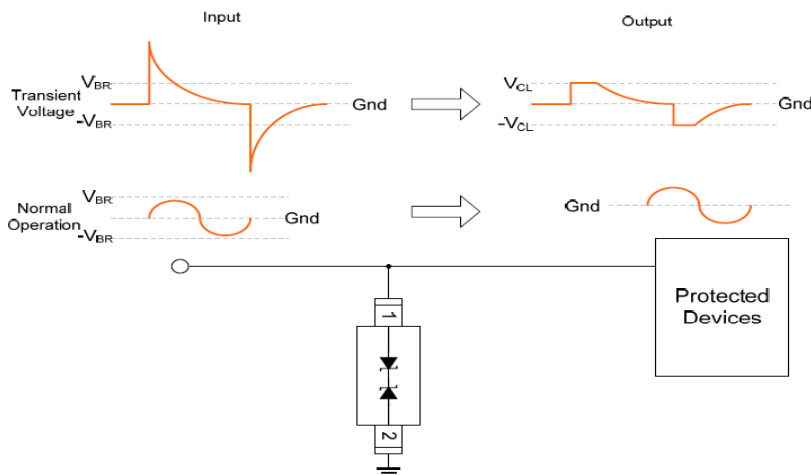
◆ ELECTRICAL CHARACTERISTICS (Tamb=25 $^{\circ}$ C)

Characteristics	Symbol	Test Condition	Min.	Typ.	Max.	Unit.
Reverse Stand-Off Voltage	V_{RWM}	T=25 $^{\circ}$ C			5	V
Reverse Leakage Current	I_{Leak}	$V_{RWM}=5$ V, T=25 $^{\circ}$ C			2.5	μ A
Reverse Breakdown Voltage	V_{BV}	$I_{BV}=1$ mA, T=25 $^{\circ}$ C	6.1		9	V
Clamping Voltage	V_{CL}	$I_{PP}=5$ A, $T_P=8/20\mu$ s, T=25 $^{\circ}$ C		7	8	V
Clamping Voltage	V_{CL}	$I_{PP}=9.4$ A, $T_P=8/20\mu$ s, T=25 $^{\circ}$ C		17	18.6	V
ESD Holding Voltage	V_{hold}	IEC 61000-4-2 6KV, T=25 $^{\circ}$ C, Contact mode		10.5		V
Channel Input Capacitance	C_{IN}	$V_P=0$ V, f=1MHz, T=25 $^{\circ}$ C		13.5	15	pF

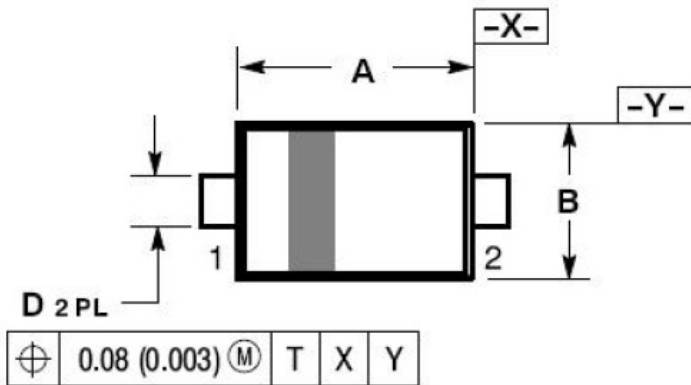
◆ **TYPICAL ELECTRICAL CHARACTERISTICS CURVE**



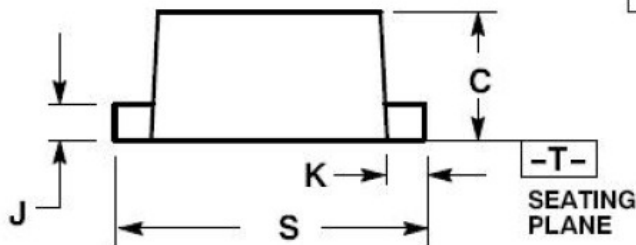
◆ **TYPICAL APPLICATIONS**



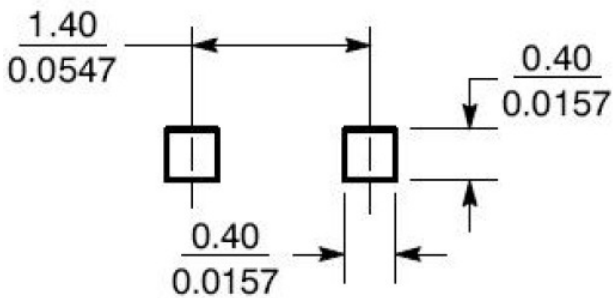
◆ PACKAGE OUTLINE



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.10	1.20	1.30	0.043	0.047	0.051
B	0.70	0.80	0.90	0.028	0.032	0.035
C	0.50	0.60	0.70	0.020	0.024	0.028
D	0.25	0.30	0.35	0.010	0.012	0.014
J	0.07	0.14	0.20	0.0028	0.0055	0.0079
K	0.15	0.20	0.25	0.006	0.008	0.010
S	1.50	1.60	1.70	0.059	0.063	0.067



◆ SOLDERING FOOTPRINT



SCALE 10:1 $\left(\frac{\text{mm}}{\text{inches}}\right)$