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CMTLDF02C150BSE

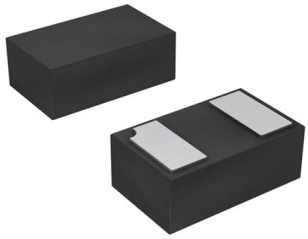
BI-DIRECTIONAL TRANSIENT VOLTAGE SUPPRESSING DIODES

◆ DESCRIPTIONS

The CMTLDF02C150BLE 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 CMTLDF02C150BSE`S typical applications are Computer Interfaces Protection, Microprocessors Protection, Control Signal Lines Protection etc.

◆ Circuit Diagram



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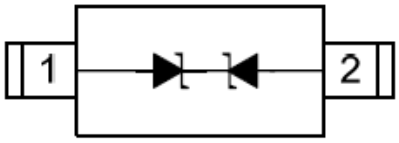
◆ Pin Configuration



◆ 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 DFN1006-2 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
CMTLDF02C150BSE	DFN1006-2	Halogen free	Tape

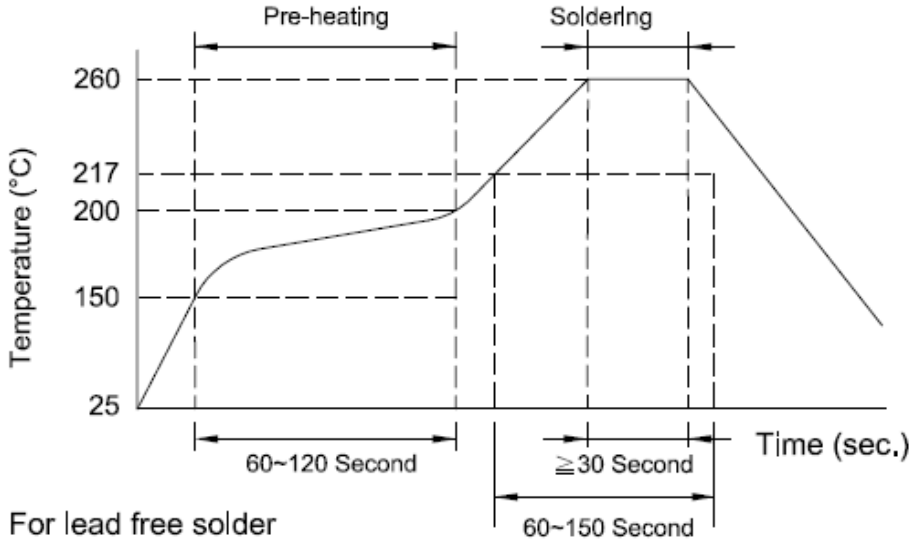
◆ABSOLUTE MAXIMUM RATINGS

Characteristics	Symbol	Rating	Unit
Peak Pulse Current（8/20μs）	I_{PP}	5	A
ESD Per IEC61000-4-2 （air discharge）	V_{ESD1}	±15kV	kV
ESD Per IEC61000-4-2（contact discharge）	V_{ESD2}	±8kV	kV
Lead Soldering Temperature	T_{SOL}	260(10sec.)	°C
Operating Temperature	T_{OP}	-55 ~ +125	°C
Storage Temperature	T_{STO}	-55 ~ +150	°C

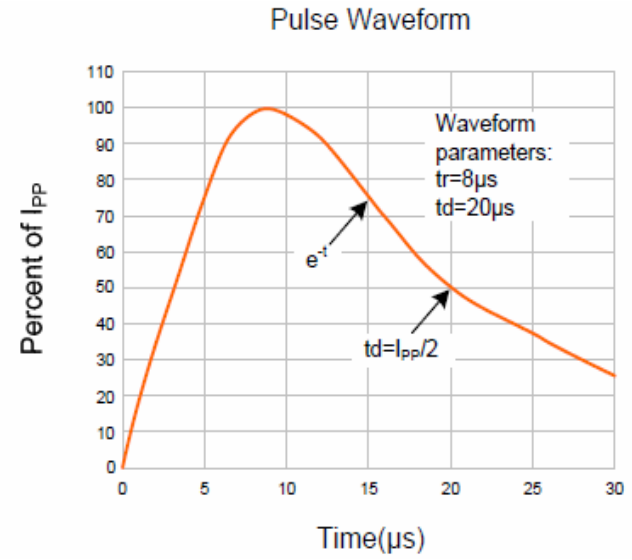
◆ELECTRICAL CHARACTERISTICS（Tamb=25°C）

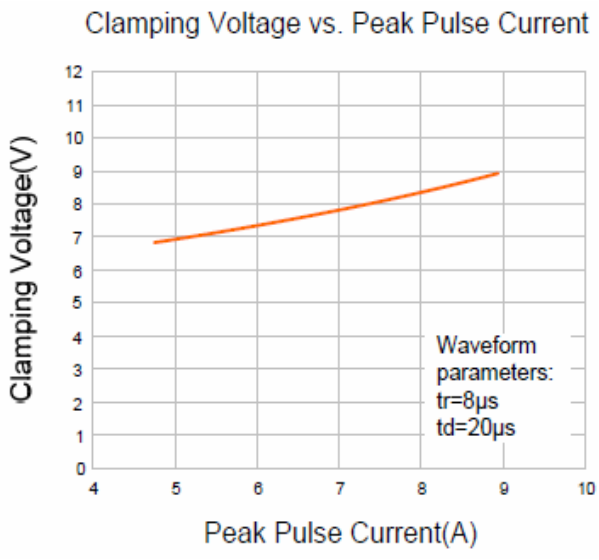
Characteristics	Symbol	Test Condition	Min.	Typ.	Max.	Unit.
Reverse Stand-Off Voltage	V_{RWM}	T=25°C			6	V
Reverse Leakage Current	I_{Leak}	V_{RWM}=5V,T=25°C			1	μA
Reverse Breakdown Voltage	V_{BV}	I_{BV}=1mA,T=25°C	6.3	7.5	8.4	V
Clamping Voltage	V_{CL}	I_{PP}=5A, T_P=8/20μs, T=25°C		9.8	11.5	V
Clamping Voltage	V_{CL}	I_{PP}=16A,TLP,T=25°C		12.6	16.3	V
ESD Holding Voltage	V_{hold}	IEC 61000-4-2 6KV, T=25°C, Contact mode		10.5		V
Channel Input Capacitance	C_{IN}	V_P=0V, f=1MHz, T=25°C		15	20	pF

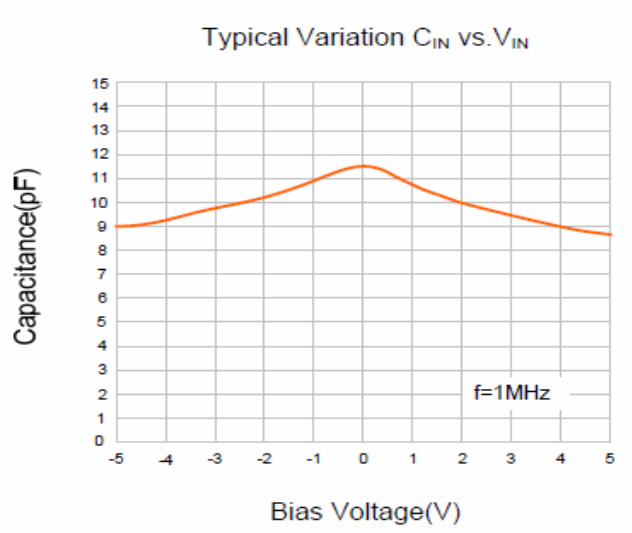
◆RECOMMENDABLE REFLOW SOLDERING

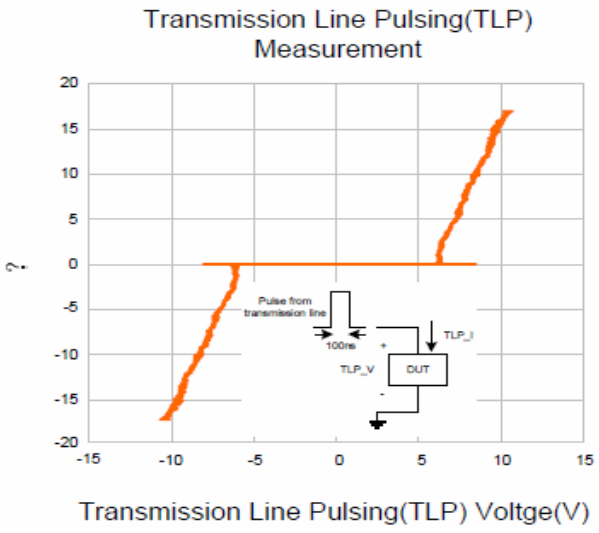


◆ TYPICAL ELECTRICAL CHARACTERISTICS CURVE

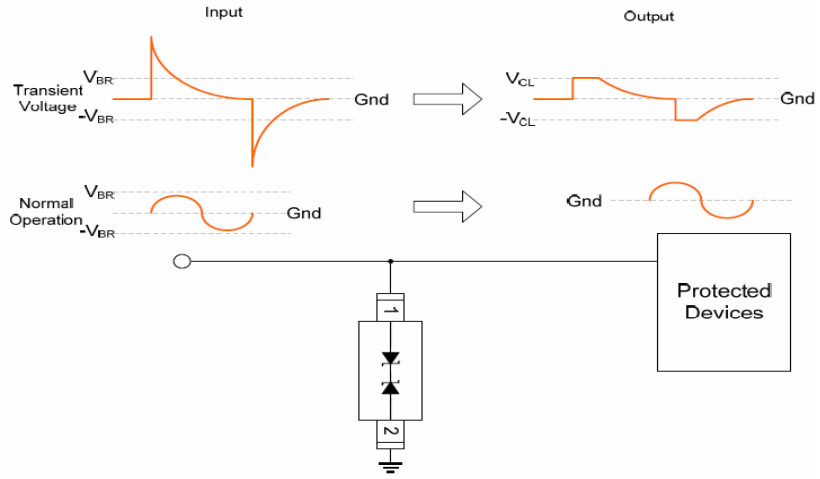








◆ TYPICAL APPLICATIONS



◆ PACKAGE OUTLINE

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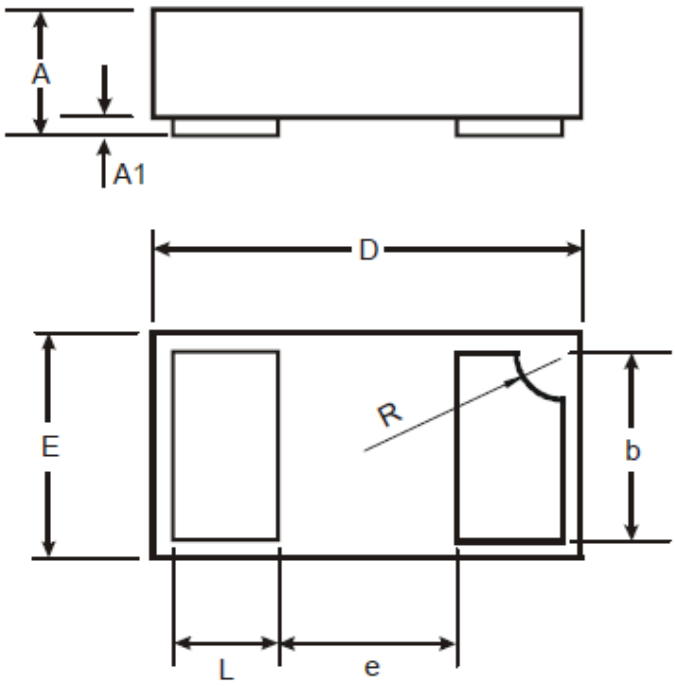

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Dim	Min	Max	Typ
A	0.47	0.53	0.50
A1	0	0.05	0.03
b	0.45	0.55	0.50
D	0.95	1.075	1.00
E	0.55	0.675	0.60
e	-	-	0.40
L	0.20	0.30	0.25
R	0.05	0.15	0.10
All Dimensions in mm			