GSD12FDT

Transient Voltage Suppressor

DESCRIPTION

The GSD12FDT is a transient voltage suppressor designed to protect power interfaces. It is suitable to replace multiple discrete components in portable electronics.

The GSD12FDT is specifically designed to protect power lines.

The GSD12FDT is available in DFN1610-2L package. Standard products are Pb-free and Halogen-free.

FEATURES

✧Transient protection for high-speed data lines
IEC 61000-4-2 (ESD) ±30kV (Air)
±30kV (Contact)
✧Peak power dissipation: 2275W (8/20μs)
✧Working voltages : 12V
✧Ultra-small package (1.6mm×1.0mm×0.5mm)
✧Solid-state silicon technology
✧Low clamping voltage

MACHANICAL DATA

✧DFN1610-2L package
✧Flammability Rating: UL 94V-0
✧Packaging: Tape and Reel
✧High temperature soldering guaranted:260℃/10s
✧Reel size: 7 inch

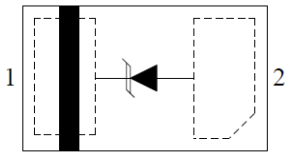
ORDERING INFORMATION

✧Device: GSD12FDT
✧Package: DFN1610-2L
✧Marking: MT
✧Material: Halogen free
✧Packing: Tape & Reel
✧Quantity per reel: 3,000pcs

APPLICATIONS

✧Power management
✧Power supply protection

PIN CONFIGURATION



PACKAGE OUTLINE

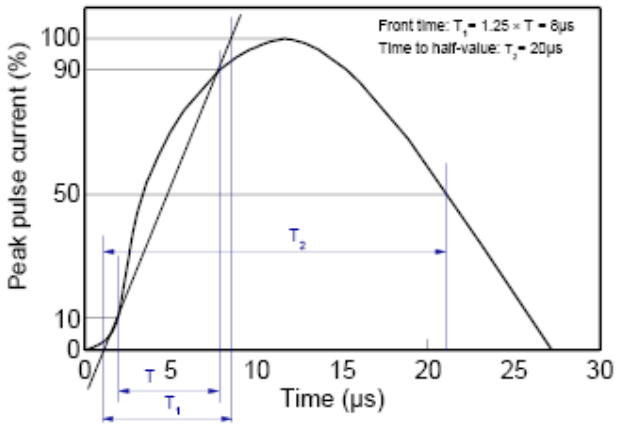
ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±30 ±30	kV
P_{PP}	Peak Pulse Power (8/20μs)	2275	W
T_J	Junction Temperature	125	°C
T_{OPT}	Operating Temperature	-40~85	°C
T_L	Lead Temperature	260	°C
T_{STG}	Storage Temperature	-55~150	°C

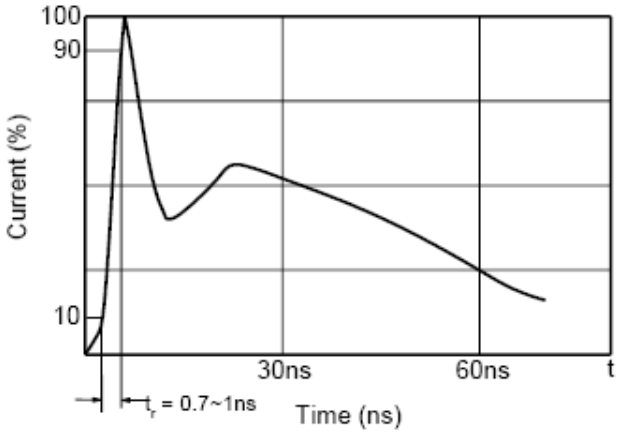
ELECTRICAL CHARACTERISTICS (Tamb=25°C)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				12.0	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	12.7			V
I_R	Reverse Leakage Current	V_{RWM} = 12V			100	nA
V_C	Clamping Voltage	I_{PP} = 25A, t_p = 8/20μs			25	V
		I_{PP} = 65A, t_p = 8/20μs			35	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz			510	pF

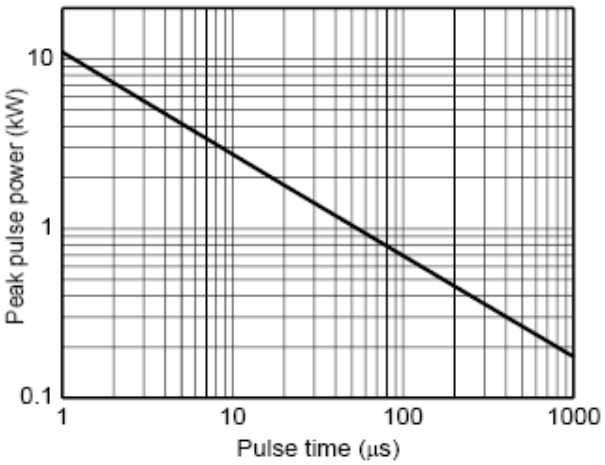
ELECTRICAL CHARACTERISTICS CURVE



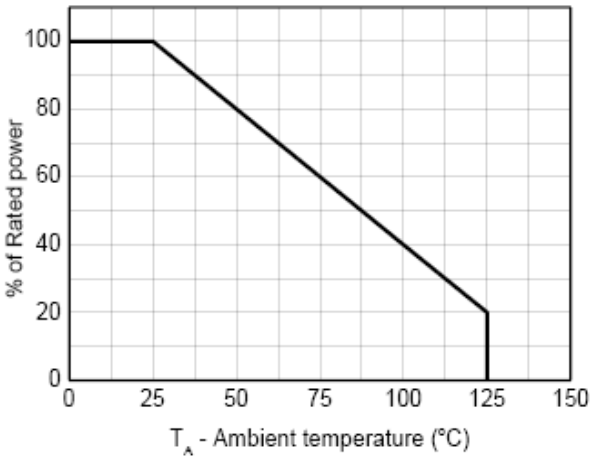
8/20μs waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2

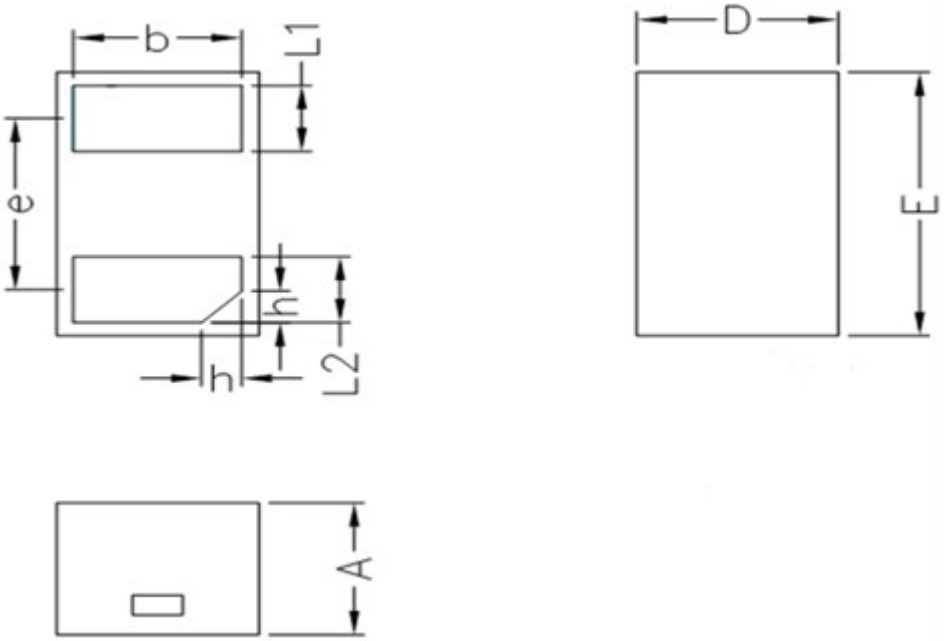


Non-repetitive peak pulse power vs. Pulse time



Power derating vs. Ambient temperature

DFN1610-2L PACKAGE OUTLINE DIMENSIONS



COMMON DIMENSION(mm)			
REF	Min	Nom	Max
D	0.95	1.00	1.05
E	1.55	1.60	1.65
L1	0.35	0.40	0.45
L2	0.35	0.40	0.45
b	0.75	0.80	0.85
e		1.09BSC	
A	0.45	0.50	0.55
h	0.15	0.20	0.25