

Features

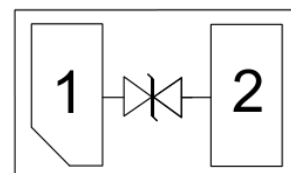
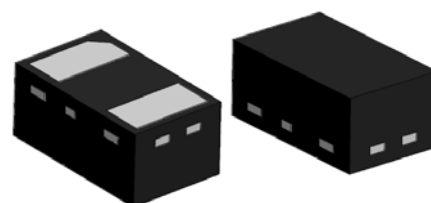
- ◇ 150 W (8/20 μ s) Peak Pulse Power
- ◇ Low Capacitance ESD Protection ◇
- DFN1006-2 Package
- ◇ RoHS Compliant
- ◇ Matte Tin Lead finish (Pb-Free)
- ◇ Protect One High Speed Data Line ◇ Meet

IEC61000-4-2 Level 4:

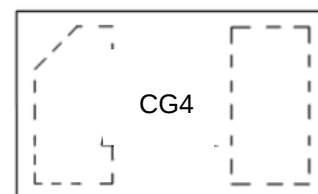
Contact Discharge > 15kV Air

Discharge > 15kV

Circuit Diagram



Package Outline



Applications

- ◇ Communication System
- ◇ Portable Instrumentation
- ◇ Audio and Video Equipment
- ◇ Computers and Peripherals
- ◇ USB 1.1, USB 1.0 Ports

PB= Device Code
CG4= Device Code

Ordering information

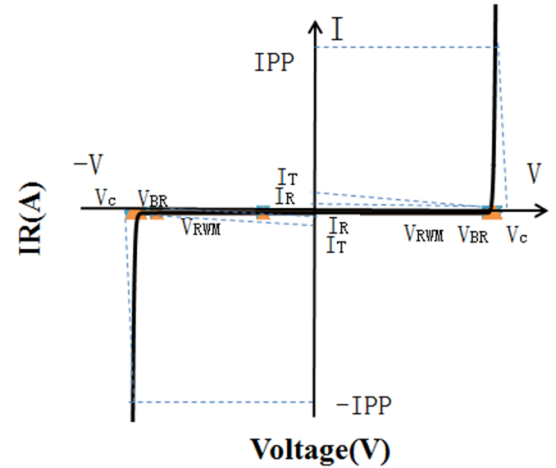
Device	Package	Reel Size	Qty / Reel
ESD9B24B	DFN1006-2	7 inch	10000

Maximum Ratings (Ta = 25°C)

Symbol	Parameter	Value	Unit
PPK	Peak Pulse Power	150	W
IPP	Peak Pulse Current	3	A
VESD (Contact)	Contact ESD Voltage per IEC61000-4-2	15	kV
VESD (Air)	Air ESD Voltage per IEC61000-4-2	15	kV
TJ	Junction Temperature	-55 to +150	°C
TSTG	Storage Temperature	-55 to +150	°C

Portion Electronics Parameter

Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_c	Clamping Voltage @ I_c



Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				24	V
VBR	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	26.7	29	31	V
IR	Reverse Leakage Current	VRWM = 24V			1	μA
VC	Clamping Voltage	$I_{PP} = 1\text{A}$ (8/20 μs)			45	V
VC	Clamping Voltage	$I_{PP} = 3\text{A}$ (8/20 μs)			55	V
CJ	Capacitance	VR = 0V, f = 1MHz		8	15	pF

SURGE CURRENT WAVEFORM:

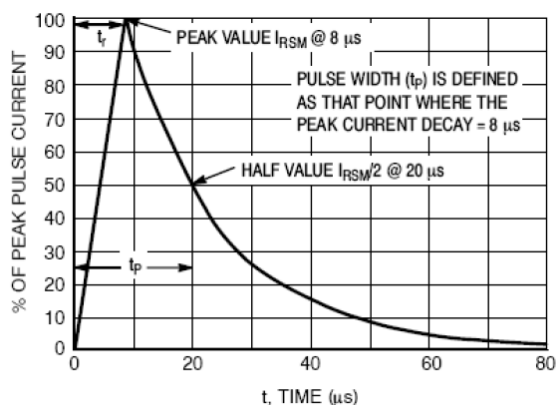
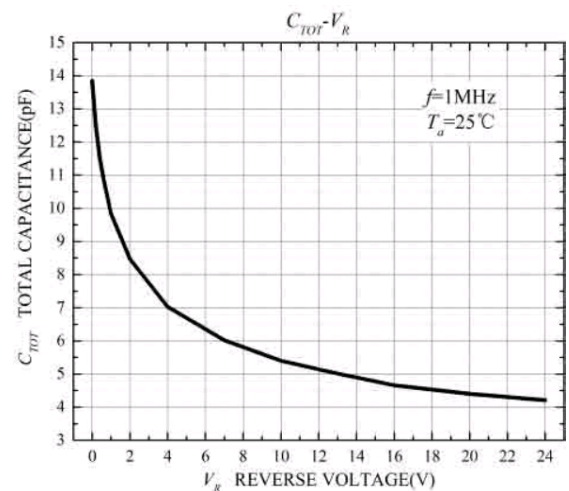
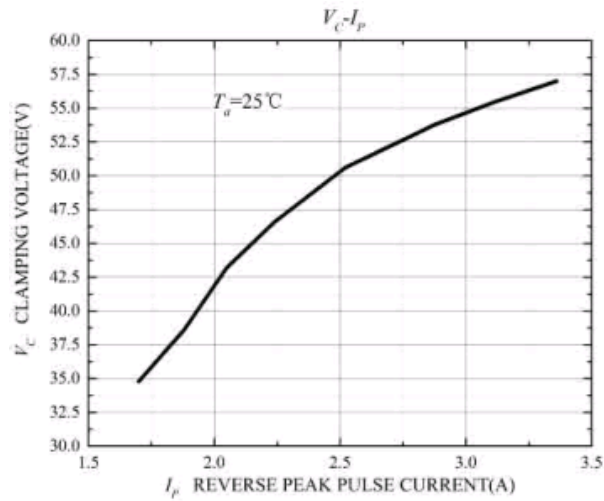


Figure 1. 8 x 20 μs Pulse Waveform

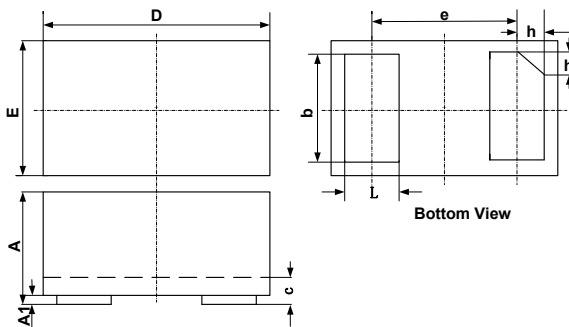
CAPACITANCE CURVE:



Typical Performance Curves

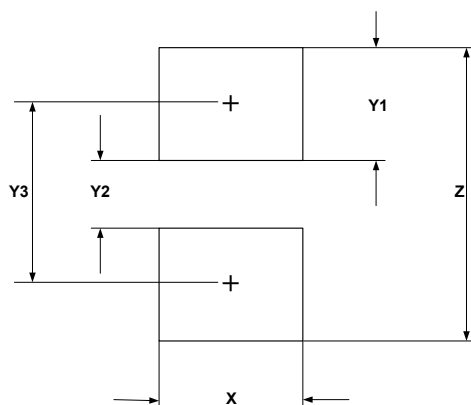


DFN1006-2 Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
c	0.12	0.15	0.18	0.005	0.006	0.007
D	0.95	1.00	1.05	0.037	0.039	0.041
e	0.65 BSC			0.026 BSC		
E	0.55	0.60	0.65	0.022	0.024	0.026
L	0.20	0.25	0.30	0.008	0.010	0.012
h	0.07	0.12	0.17	0.003	0.005	0.007

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.60	0.024
Y1	0.50	0.020
Y2	0.30	0.012
Y3	0.80	0.032
Z	1.30	0.052