

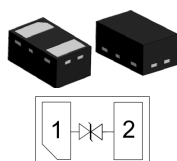
Features

80W (8/20 μ s) Peak Pulse Power
 Ultra-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 > 20kV

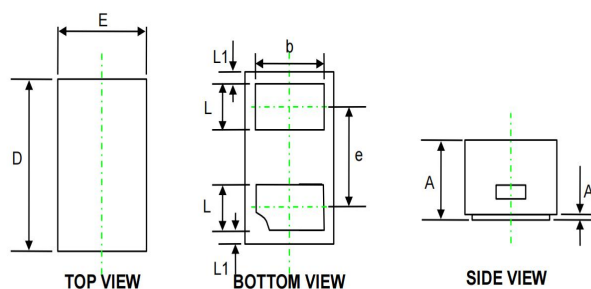
Applications

Serial ATA
 USB Ports
 MDDI Ports
 Display Port
 PCI Express
 Digital Visual Interface (DVI)
 Cellular Handsets and Accessories

Circuit Diagram



DFN1006



Symbol	Dimensions In Millimeters (mm)		
	Min.	Typ.	Max.
A	0.44	0.47	0.50
A1	0.00	0.03	0.05
D	0.95	1.00	1.08
E	0.55	0.60	0.68
b	0.40	0.50	0.60
e	-	0.65	-
L	0.20	0.25	0.30
L1	0.05 REF.		

Dimensions in inches and (millimeters)

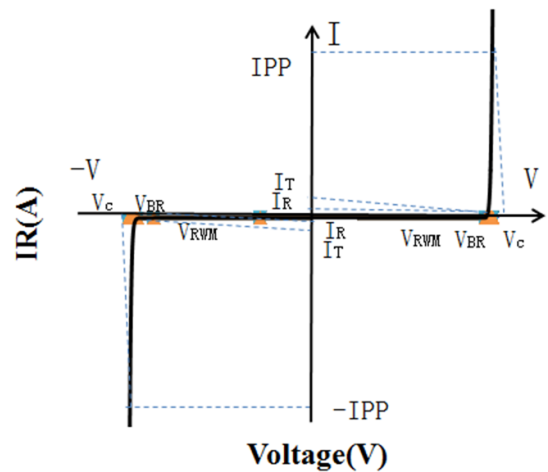
Maximum Ratings (Ta = 25°C)

Symbol	Parameter	Value	Unit
PPK	Peak Pulse Power	80	W
IPP	Peak Pulse Current	3.8	A
VESD (Contact)	Contact ESD Voltage per IEC61000-4-2	15	kV
VESD (Air)	Air ESD Voltage per IEC61000-4-2	20	kV
TJ	Junction Temperature	-55 to +125	°C
TSTG	Storage Temperature	-55 to +150	°C

ESD5311N

Portion Electronics Parameter

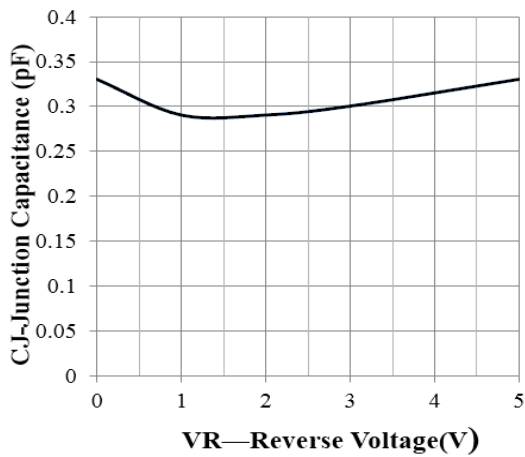
Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_c	Clamping Voltage @ I_c



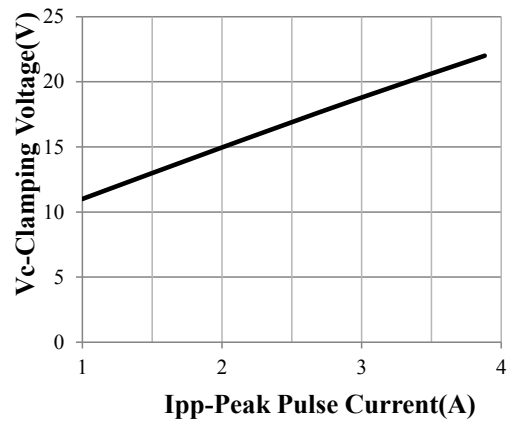
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{RWM}	Reverse Working Peak Voltage				5	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	6			V
I_R	Reverse Leakage Current	$V_{RWM} = 5\text{V}$			0.1	μA
V_c	Clamping Voltage	$I_{PP} = 1\text{A}$ (8/20 μs)			12	V
V_c	Clamping Voltage	$I_{PP} = 3.8\text{A}$ (8/20 μs)			23	V
C_J	Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$		0.35	0.5	pF

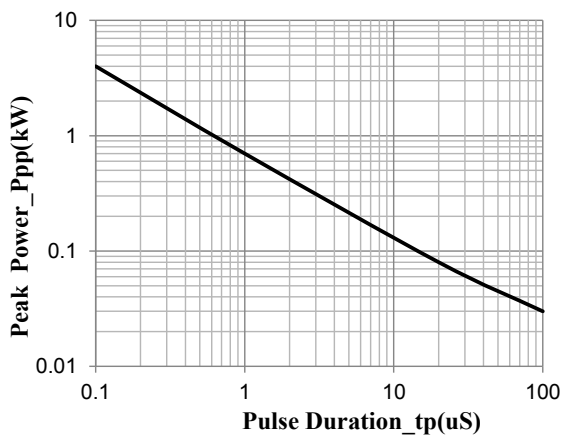
RATING AND CHARACTERISTIC CURVES (ESD5311N)



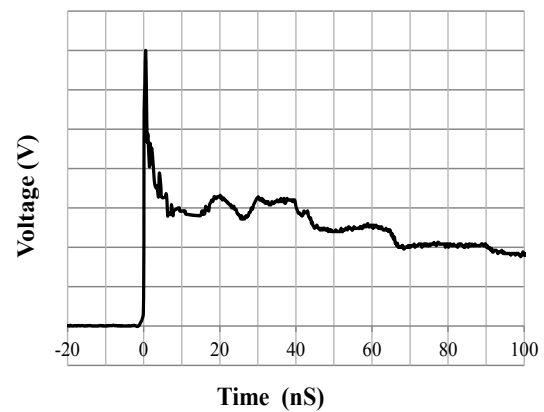
Junction Capacitance vs. Reverse Voltage



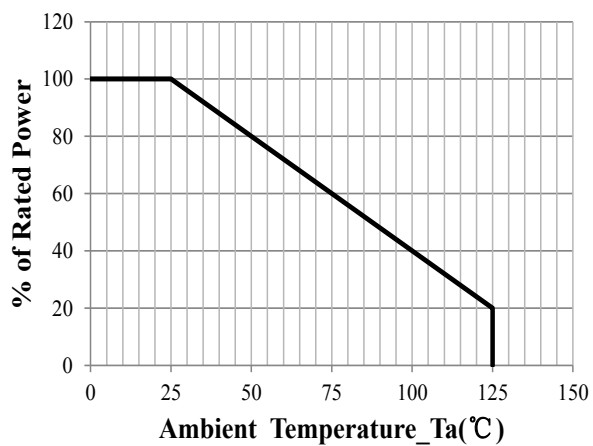
Clamping Voltage vs. Peak Pulse Current



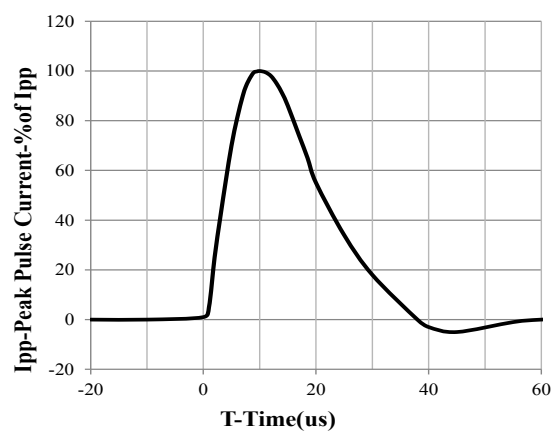
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



Power Derating Curve



8 X 20μs Pulse Waveform