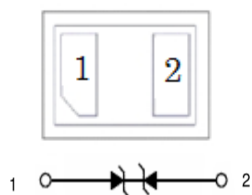


Bi-Directional Transient Voltage Suppressor
 Low Capacitance and Low Leakage
 Response Time is Typically < 1 ns
 IEC61000-4-2 Level 4 ESD Protection
 ROHS Compliant
 UL-94 V-0 / Green EMC
 Matte Tin Lead finish (Pb-Free)

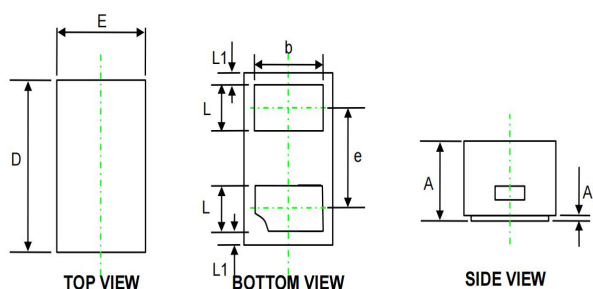
Equivalent Circuit



Circuit Diagram



DFN1006-2



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)

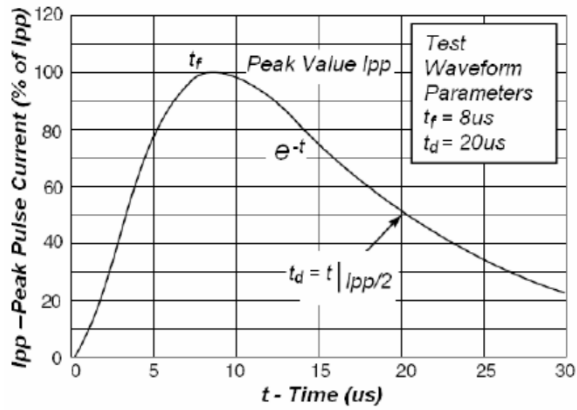
Symbol	Parameter	Value	Units
VESD-Air	ESD Voltage IEC61000-4-2 Air	± 25	kV
VESD-Contact	ESD Voltage IEC61000-4-2 Contact	± 20	kV
PD	Total Power Dissipation on FR-5 Board	200	mW
TJ	Junction Temperature	-55 to 150	°C
TSTG	Storage Temperature	-55 to 150	°C
TL	Lead Solder Temperature – Maximum (10 Second Duration)	260	°C

ESD5451N

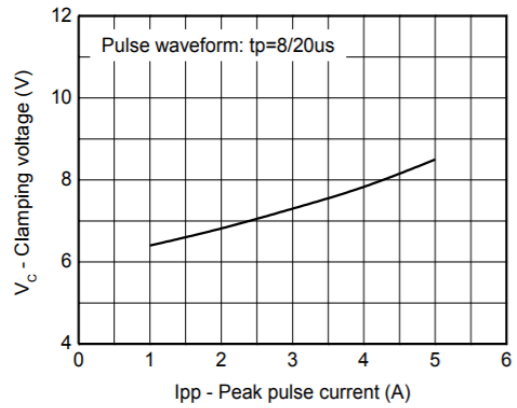
ELECTRICAL CHARACTERISTICS (Ta = 25 °C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{RWM}	Reverse Working Peak Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1mA$	5.6		8.0	V
I_{R1}	Reverse Current	$V_{RWM} = 5V$			0.5	μA
I_{R2}	Reverse Current	$V_R = 3.5V$			0.3	μA
Vc	Clamping Voltage	$I_{pp} = 1A$			9.8	V
Vc	Clamping Voltage	$I_{pp} = 5.5A$			12.5	V
C	Capacitance	$V_R = 0V, f = 1MHz$			15	pF

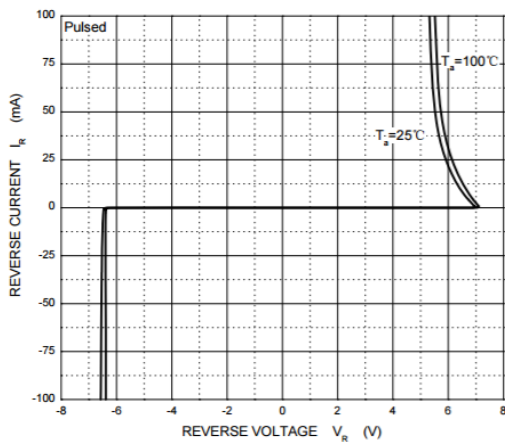
RATING AND CHARACTERISTIC CURVES (ESD5451N)



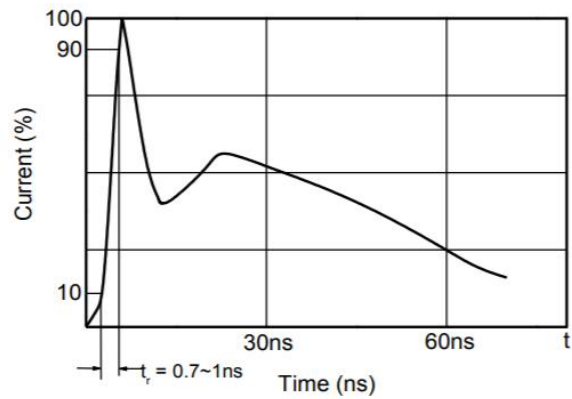
Pulse Waveform



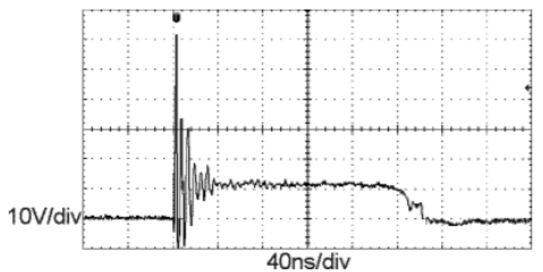
Clamping voltage vs. Peak pulse current



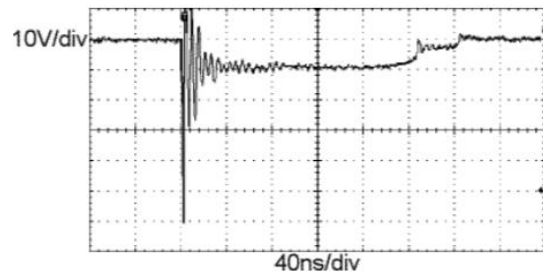
Reverse Characteristics



Contact discharge current waveform per IEC61000-4-2



ESD clamping
 (+8kV contact discharge per IEC61000-4-2)



ESD clamping
 (-8kV contact discharge per IEC61000-4-2)