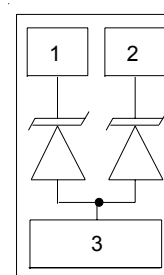
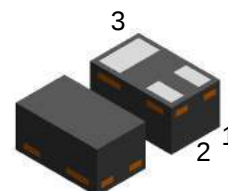


2-Line, Uni-directional, Transient Voltage Suppressor

Descriptions

The ESD5N is designed to protect voltage sensitive components that require ultra-low capacitance from ESD and transient voltage events. Excellent clamping capability, low capacitance, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its low capacitance, it is suited for use in high frequency designs such as USB 2.0 high speed and antenna line applications.



DFN1006-3L

Features

- Stand-off voltage: +5V Max
- Transient protection for each line according to IEC61000-4-2 (ESD): 16KV Air, 10KV contact compliance
- Solid-state silicon technology
- Low leakage current

Applications

- Cellular handsets and accessories
- Portable electronics
- Communication systems
- Computers and peripherals

Order information

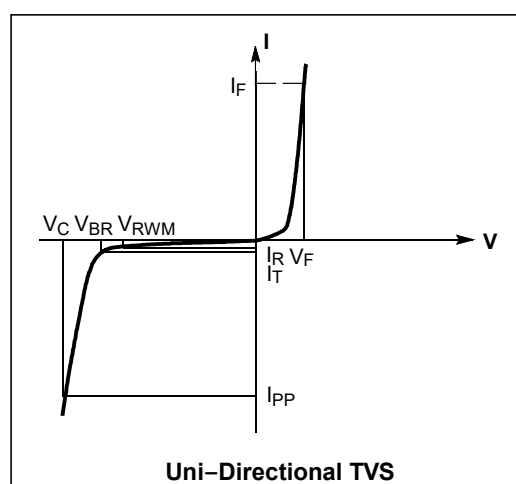
Model	Marking	Package	shipping
ESD5N005TR	Q2	DFN1006-3L	10000/Tape&Reel

Electrical characteristic(T=25°C, unless otherwise specified)

Parameter	Symbol	Conditions	Min.	TYP.	Max.	Units
Reverse stand-off voltage	V_{RWM}				5.0	V
Reverse leakage current	I_R	$V_{RWM}=5V$			0.5	μA
Reveres breakdown voltage	V_B	$I_T=1mA$	6.0		9.0	V
Clamping voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$			9.5	V
		$I_{PP}=4A, t_p=8/20\mu s$			14.0	V
Junction capacitance	C_J	$V_R=0V, f=1MHz$		0.5	0.7	pF
		$V_R=0V, f=1GHz$		0.3		pF

Electrical characteristic(T=25°C, unless otherwise specified)
Electrical performance curve

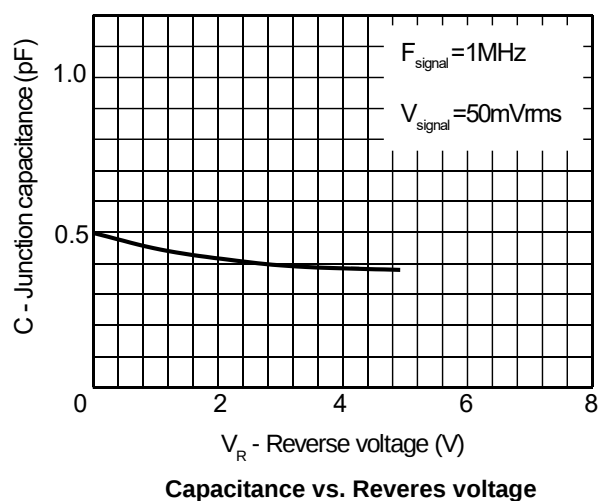
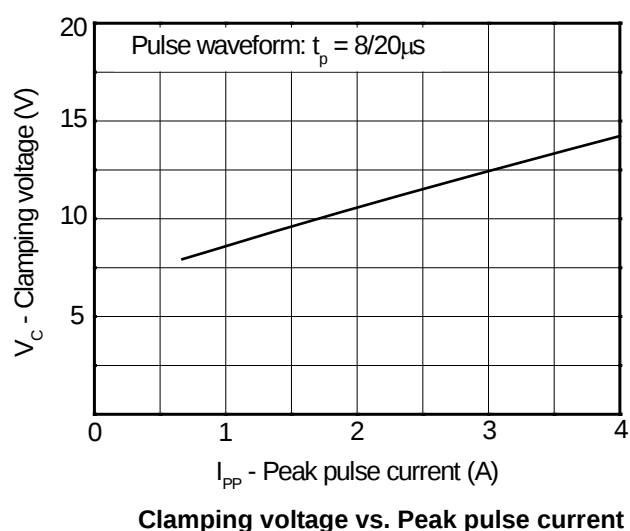
Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
I_F	Forward Current
V_F	Forward Voltage @ I_F

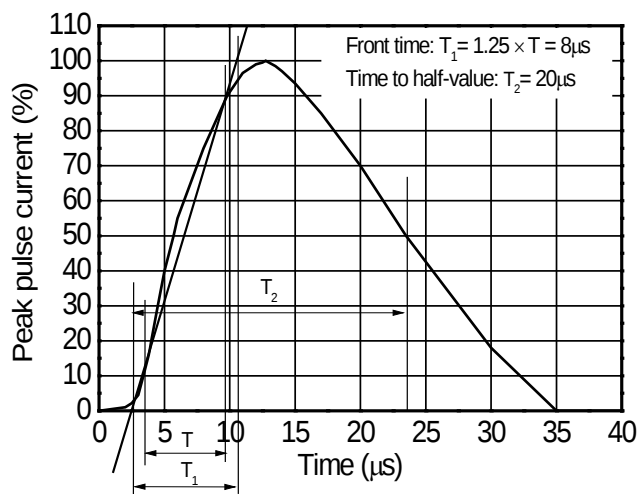


Maximum Rating

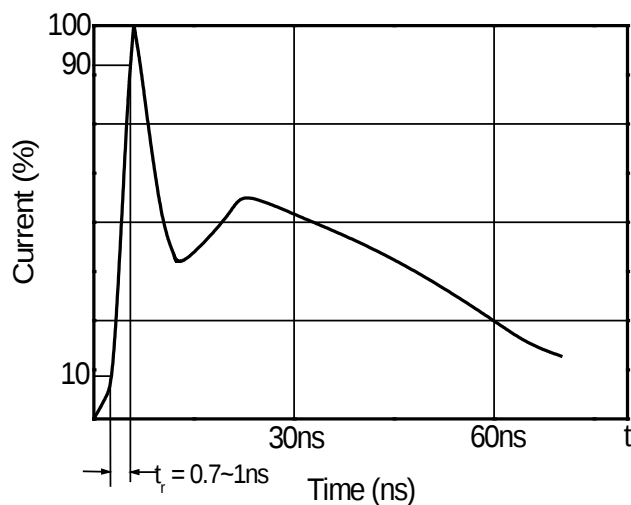
Rating	symbol	value	Units
Peak Pulse Current($t_p=8/20\mu s$)	I_{pp}	4.0	A
ESD per IEC61000-4-2(Contact)	V_{ESD}	± 10	KV
ESD per IEC61000-4-2(Air)		± 16	
Operating Temperature	T_J	-55~150	$^{\circ}C$
Storage Temperature	T_{STG}	-65~150	$^{\circ}C$

Typical characteristic

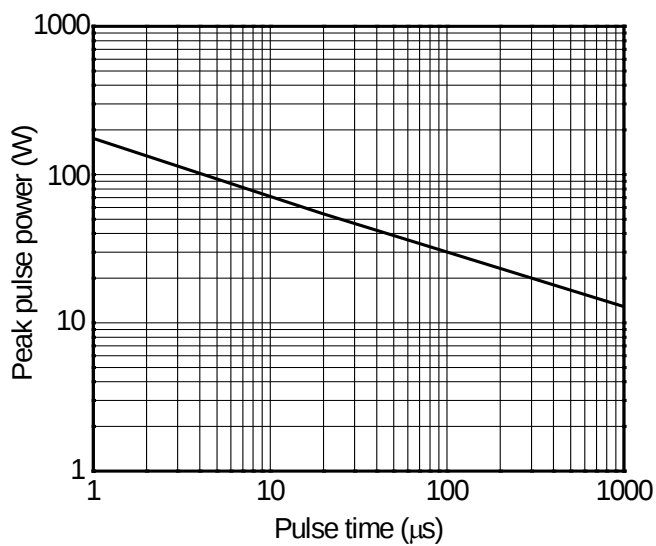




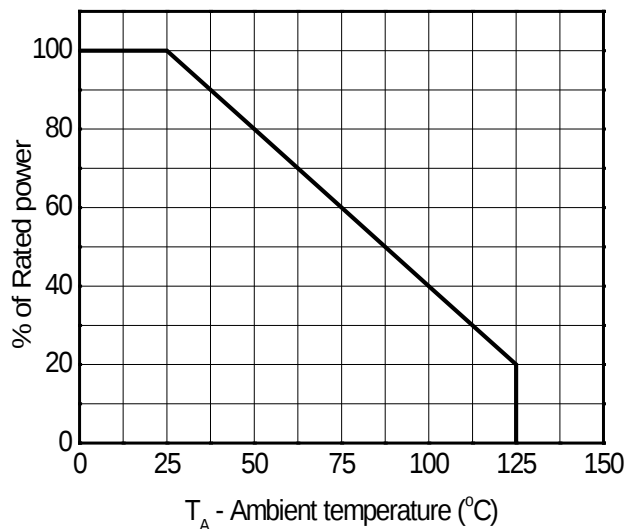
8/20 μs waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2



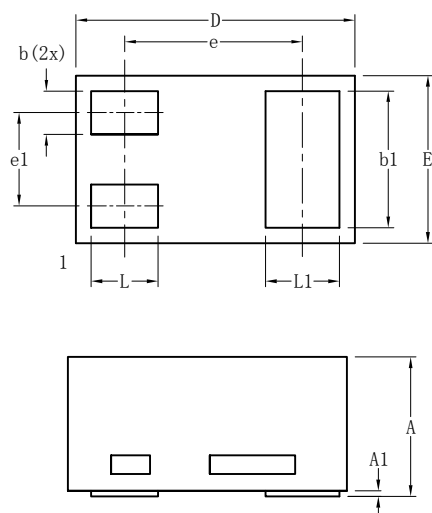
Non-repetitive peak pulse power vs. Pulse time



Power derating vs. Ambient temperature

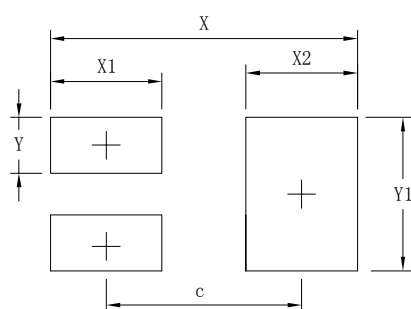
DFN1006-3

Package Outline Dimensions



DFN1006-3L			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.50	0.60	0.65
e	–	0.64	–
e1	–	0.34	–
L	0.19	0.24	0.29
L1	0.22	0.27	0.32
b	0.10	0.15	0.20
b1	0.44	0.49	0.54
A	0.43	0.48	0.53
A1	0	–	0.05
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
c	0.70
X	1.10
X1	0.40
X2	0.40
Y	0.20
Y1	0.55