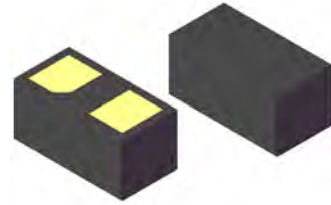


Features

- Operating voltage: 5V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-5 (Lightning) 6A (8/20 μs)
- RoHS Compliant

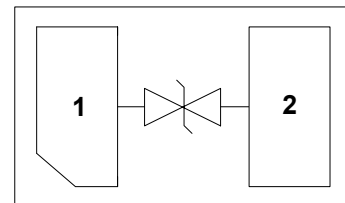
Dimensions DFN0603



Applications

- USB Ports
- SIM Ports
- Smart Phones
- Wireless Systems
- Set-top box and digital TV
- Digital video interface (DVI)
- Ethernet 10/100/1000 Base T

Pin Configuration



Mechanical Characteristics

- Package: DFN0603
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 10,000pcs
- Reel Size: 7 inch
- Device Marking: 50F

Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pp}	60	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T _J	-40 to +125	°C
Storage Temperature Range	T _{STJ}	-55 to +150	°C

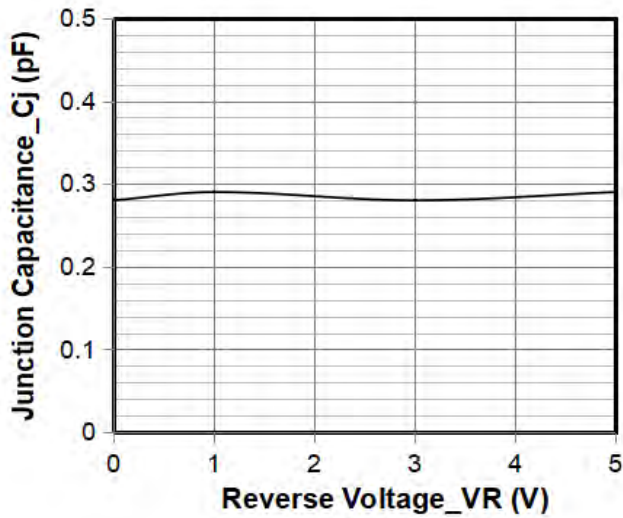
Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse maximum working voltage	V_{RWM}				5.0	V
Reverse breakdown voltage	V_{BR}	$I_T = 1mA$	5.8		9.5	V
Reverse leakage current	I_R	$V_{RWM} = 5V$		<5	200	nA
Clamping voltage ¹⁾	V_{CL}	$I_{PP} = 16A, t_p = 100ns$		9		V
Dynamic resistance ¹⁾	R_{DYN}			0.22		Ω
Clamping voltage ²⁾	V_{CL}	$V_{ESD} = 8kV$		9		V
Clamping voltage ³⁾	V_{CL}	$I_{PP} = 1A, t_p = 8/20\mu s$		6	7.5	V
		$I_{PP} = 6A, t_p = 8/20\mu s$		8	10	V
Junction capacitance	C_J	$V_R = 0V, f = 1MHz$		0.30	0.40	pF

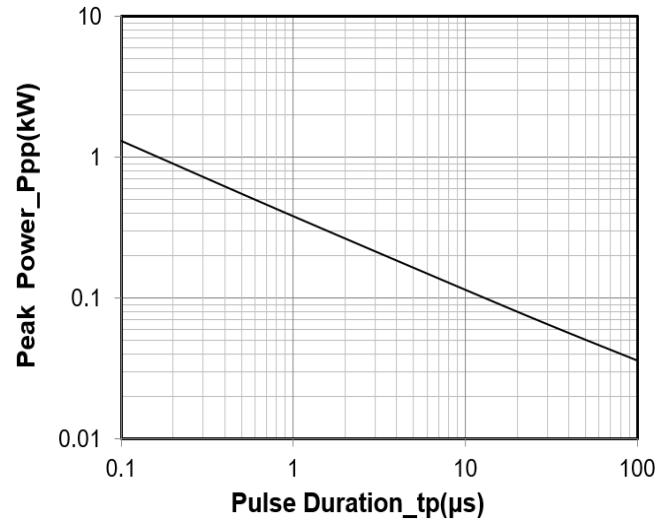
Notes:

- 1) TLP parameter: $Z_0 = 50\Omega$, $t_p = 100ns$, $t_r = 0.2ns$, averaging window from 70ns to 90ns. R_{DYN} is calculated from 4A to 16A.
- 2) Contact discharge mode, according to IEC61000-4-2.
- 3) Non-repetitive current pulse, according to IEC61000-4-5.

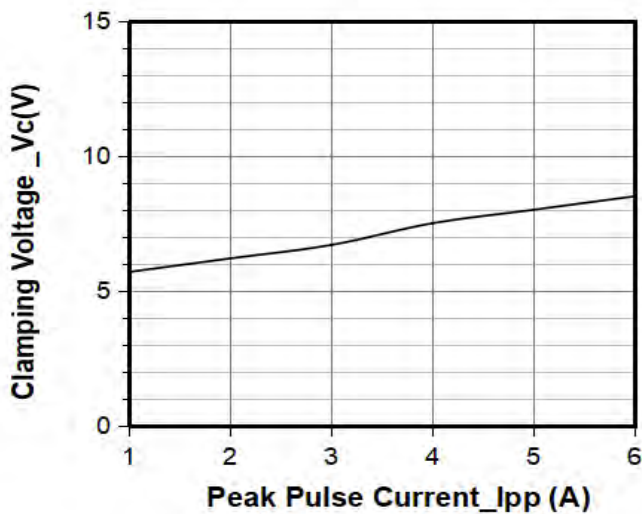
Typical Performance Characteristics(TA=25°C unless otherwise specified)



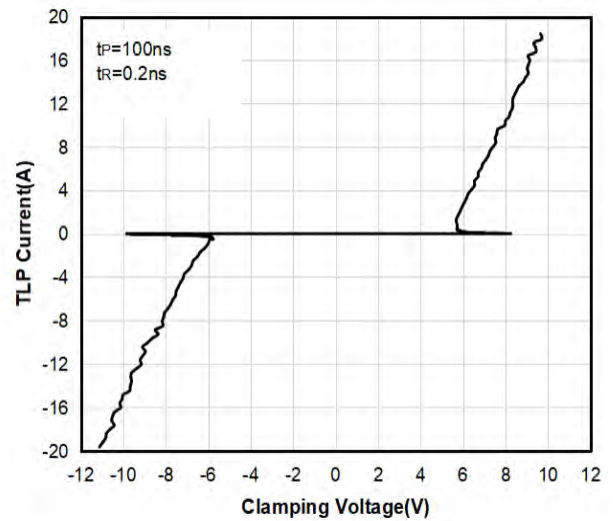
Junction Capacitance vs. Reverse Voltage



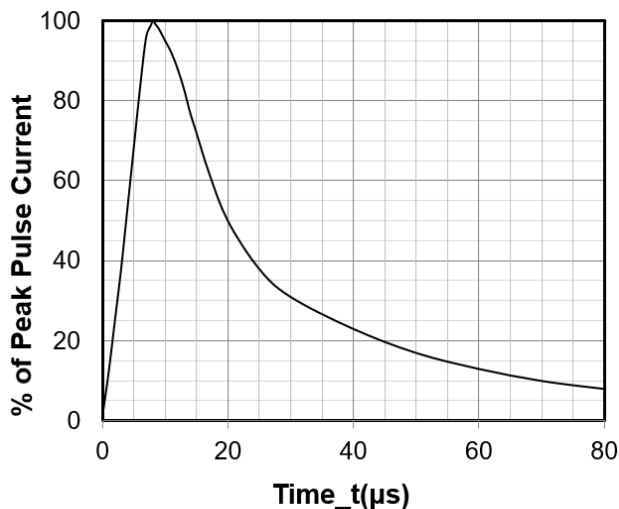
Peak Pulse Power vs. Pulse Time



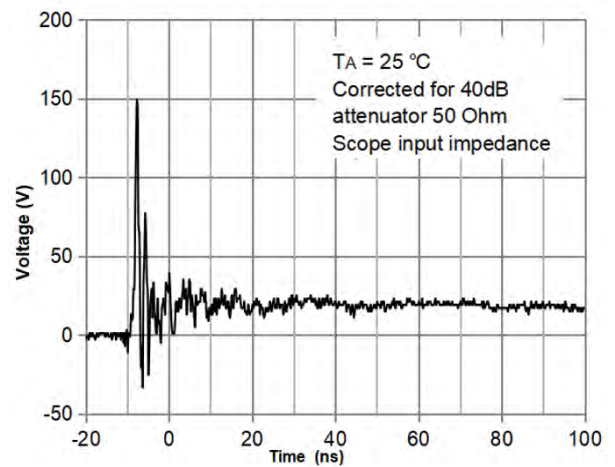
Clamping Voltage vs. Peak Pulse Current (tp = 8/20μs)



TLP Measurement



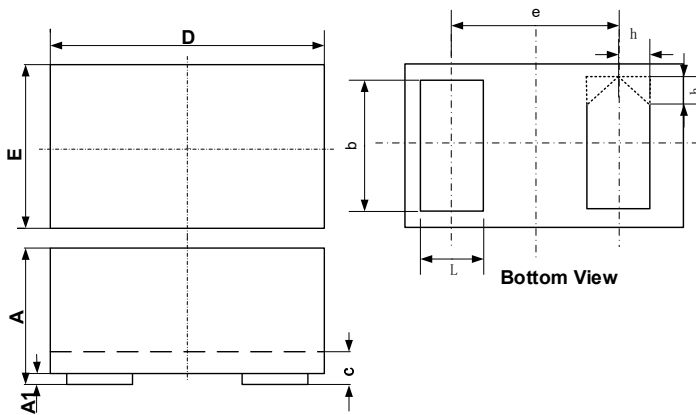
8 X 20μs Pulse Waveform



ESD Clamping Voltage

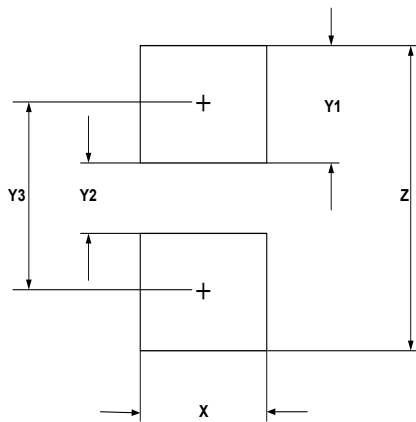
8 kV Contact per IEC61000-4-2

DFN0603 Package Outline Drawing



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.230		0.330
A1	0.000	0.020	0.050
b	0.215	0.245	0.275
c	0.120	0.150	0.180
D	0.550	0.600	0.650
e	0.355 BSC		
E	0.250	0.300	0.350
L	0.160	0.190	0.220
h	0.079 BSC		

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.30	0.012
Y1	0.25	0.010
Y2	0.15	0.006
Y3	0.40	0.016
Z	0.65	0.026

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