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PRODUCT DATASHEET

Electro-Static Discharge

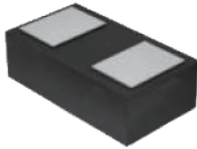
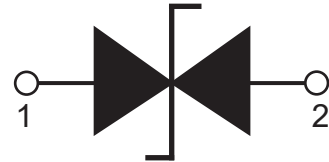
JEN0603-5V-C ESD

Features

- Ultra small package: 0.6x0.3x0.3mm(DFN0603)
- Capacitance: 15pF(typ.)
- Reverse Working Voltage: 5V
- IEC 61000-4-2 (ESD Air): ± 25 KV
- IEC 61000-4-2 (ESD Contact): ± 25 KV
- IEC 61000-4-5 (Lightning 8/20 μ s): 7A

Applications

- Smart Phone and Tablet PC
- TV and Set Top Box
- Wearable Devices
- PDA

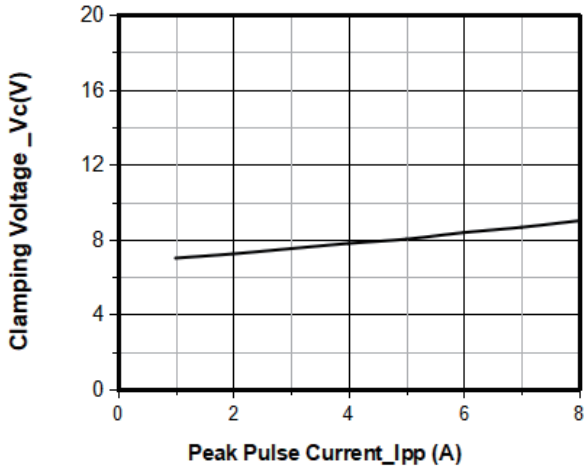
Pin Description

Schematic Diagram

Limiting Values($T_A = 25^\circ\text{C}$, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Max	Unit
V _{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2;Contact Discharge	-	± 25	kV
		IEC 61000-4-2;Air Discharge	-	± 25	kV
P _{PP}	Peak Pulse Power	$t_p=8/20\mu\text{s}$	-	70	W
I _{PPM}	Rated Peak Pulse Current	$t_p=8/20\mu\text{s}$	-	7	A
T _A	Ambient Temperature Range	-	-55	125	$^\circ\text{C}$
T _{stg}	Storage Temperature Range	-	-55	150	$^\circ\text{C}$

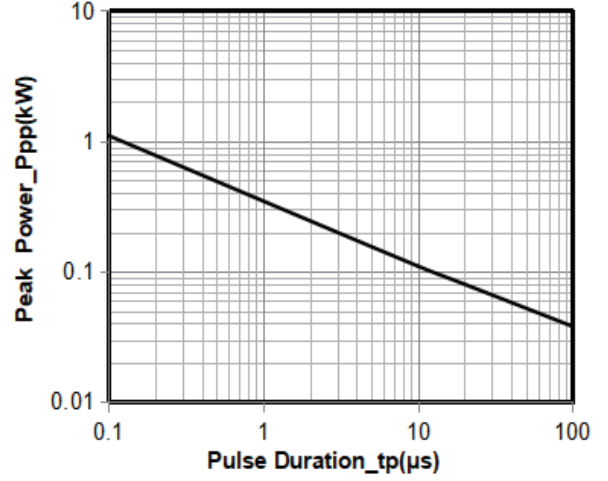
Electrical Characteristics($T_A = 25^\circ\text{C}$, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V _{RWM}	Reverse Working Voltage	$T_A=25^\circ\text{C}$	-	-	5.0	V
V _{BR}	Breakdown Voltage	$I_R=1\text{mA}; T_A=25^\circ\text{C}$	5.6	6.5	8.4	V
I _R	Reverse Leakage Current	$V_{RWM}=5\text{V}; T_A=25^\circ\text{C}$	-	-	0.1	μA
V _C	Clamping Voltage	$I_{PP}=1\text{A}(8\times 20\mu\text{s pulse})$	-	-	6	V
		$I_{PP}=7\text{A}(8\times 20\mu\text{s pulse})$	-	-	10	V
C _J	Junction Capacitance	$V_R=0\text{V}, f=1\text{MHZ}$	-	15	18	pF

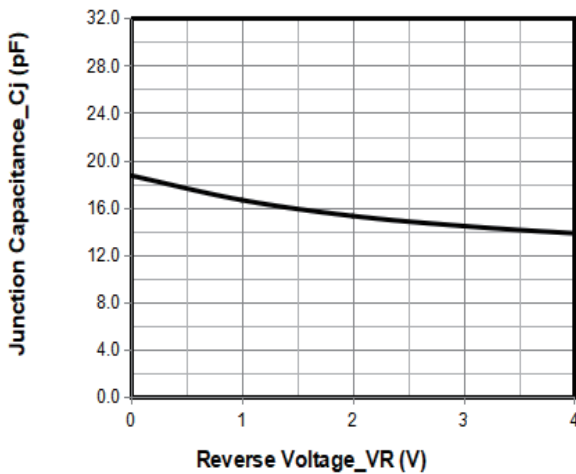
Typical Characteristics



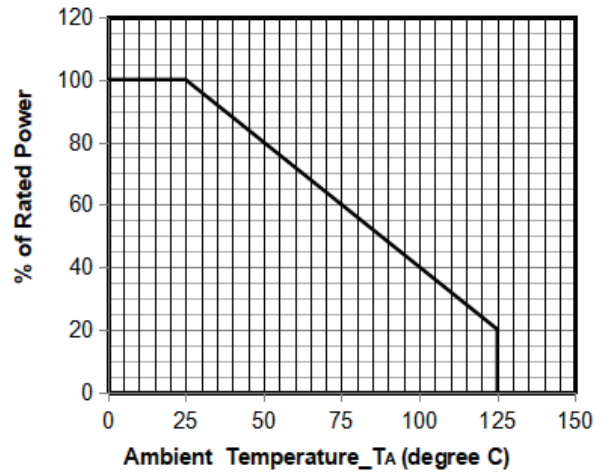
Junction Capacitance vs. Reverse Voltage



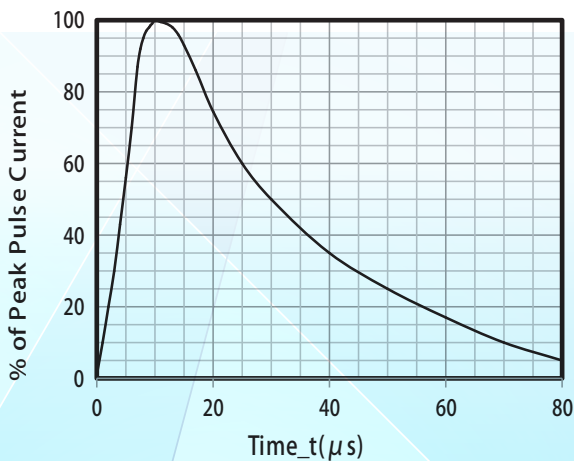
Peak Pulse Power vs. Pulse Time



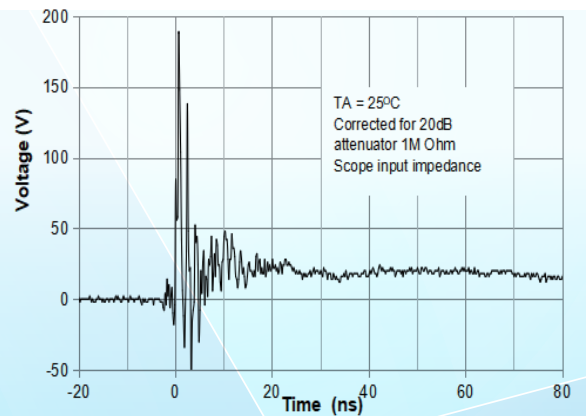
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve

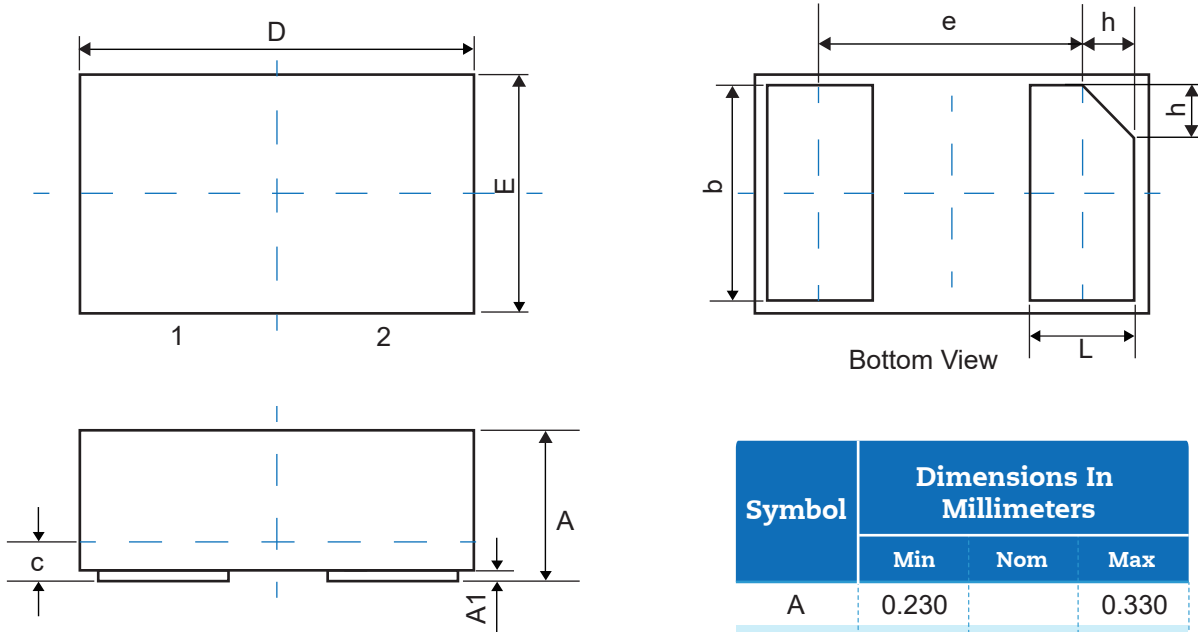


8 X 20 μ s Pulse Waveform



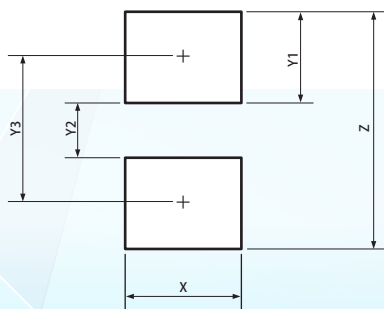
ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

Physical Dimensions(mm.)



Symbol	Dimensions In 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

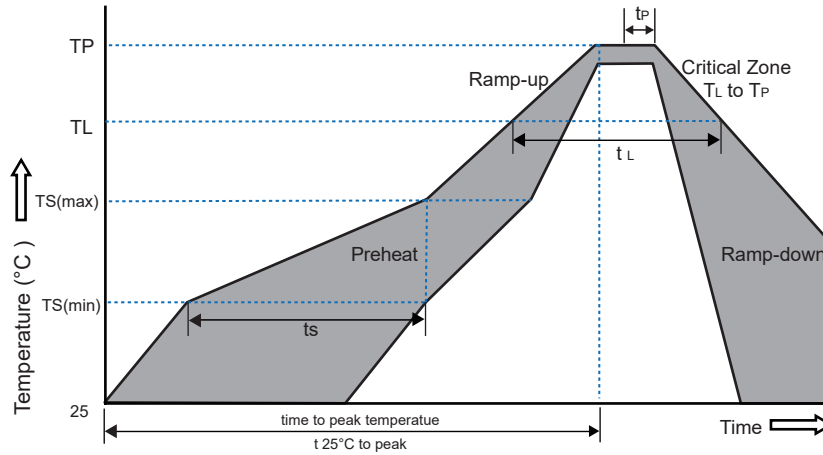


Symbol	Dimensions	
	Millimeters	Inches
X	0.30	0.012
Y1	0.25	0.010
Y2	0.15	0.006
Y3	0.40	0.016
Z	0.65	0.026

Packaging Quantity

Part Number	Size(mm)	Delivery Form	Delivery Quantity
JEN0603-5V-C	0.62x0.32x0.32	7" T&R	15,000

Soldering Parameters



Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time(Min to Max)(t_s)	60~180 secs.
Average ramp up rate (Liquid us Temp(T_L) to peak)		3°C/sec. Max
Ts(max) to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature (t_L)	60~150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (TP)		8 min. Max
Do not exceed		+260°C

Part Number System

JE N0603 - 5V - C

