

为您的产品保驾护航

PRODUCT DATASHEET

Electro-Static Discharge

JES0402-5V-C ESD

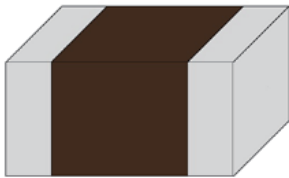
Features

- Ultra small package: 1.0x0.6x0.5mm(0402)
- Protects one data or power line
- Ultra low leakage: nA level
- 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) 8A (8/20 μs)
- RoHS Compliant

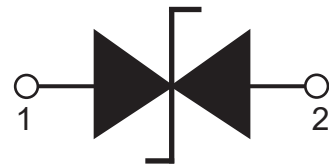
Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players
- Keypads, Side Keys, LCD Displays

Pin Description



Schematic Diagram



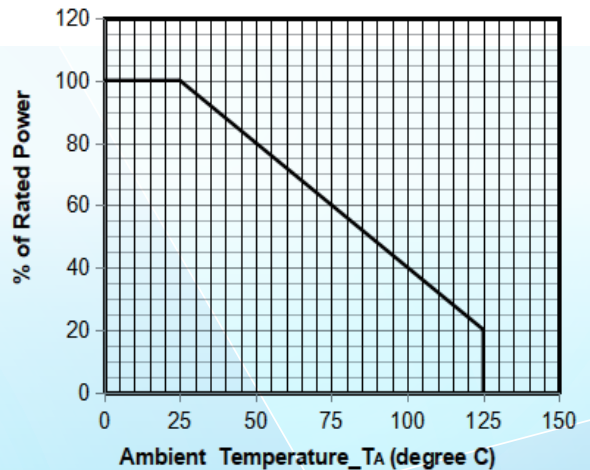
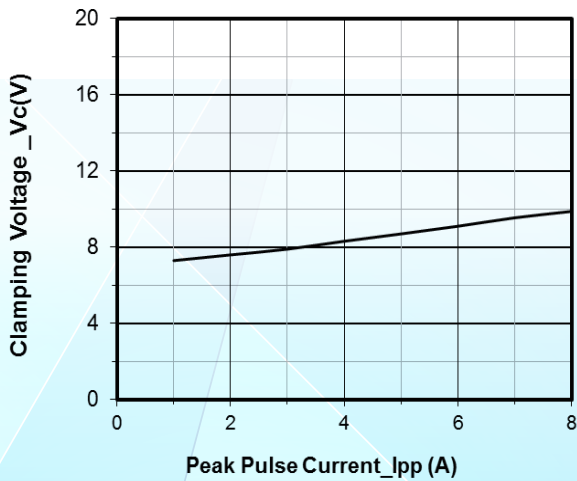
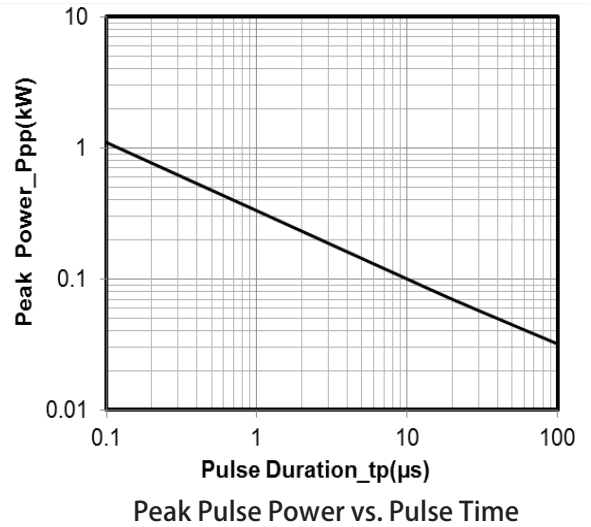
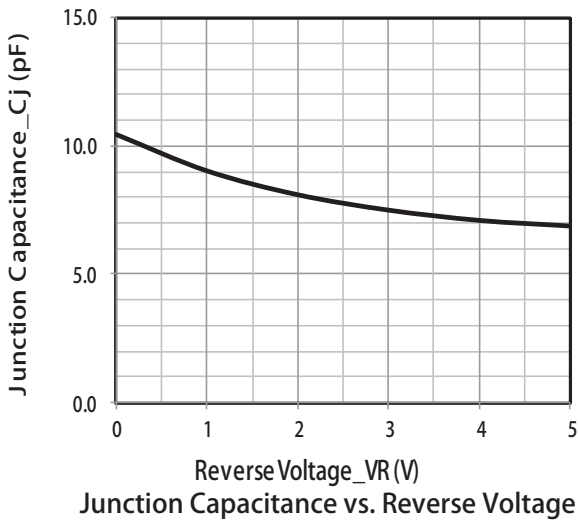
Limiting Values ($T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified)

Symbol	Parameter	Conditions	Value	Unit
V _{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	± 30	kV
		IEC 61000-4-2; Air Discharge	± 30	kV
P _{PP}	Peak Pulse Power	$t_P=8/20\mu\text{s}$	100	W
I _{PP}	Peak Pulse Current	$t_P=8/20\mu\text{s}$	8	A
T _J	Operating Temperature Range	-	-55 to +125	$^\circ\text{C}$
T _{stg}	Storage Temperature Range	-	-55 to +125	$^\circ\text{C}$

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

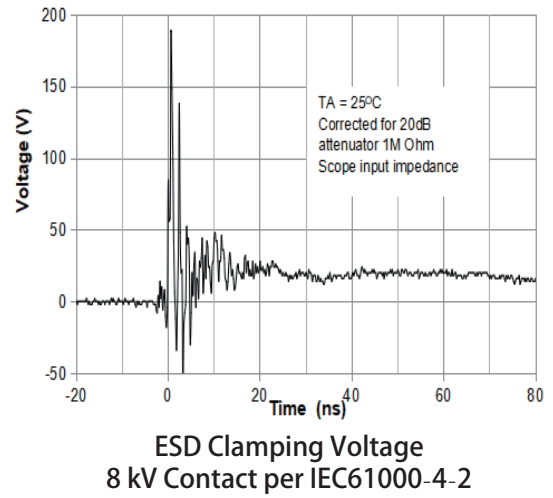
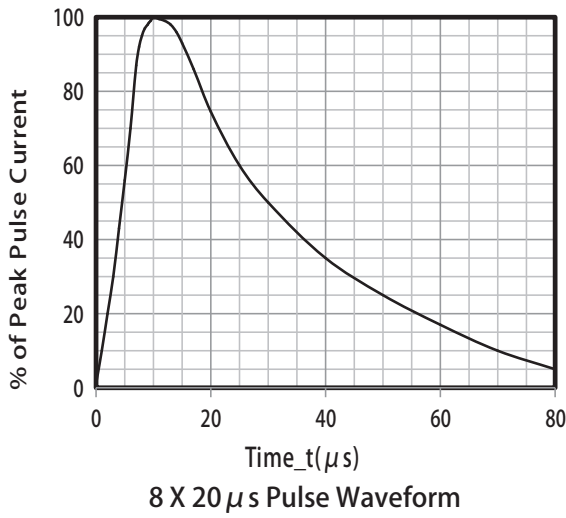
Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V_{RWM}	Reverse Working Voltage	$T_A=25^\circ\text{C}$	-	-	5.0	V
V_{BR}	Breakdown Voltage	$I_R=1\text{mA}; T_A=25^\circ\text{C}$	5.8	-	7.5	V
I_R	Reverse Leakage Current	$V_{RWM}=5\text{V}; T_A=25^\circ\text{C}$	-	-	0.2	μA
V_C	Clamping Voltage	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	-	-	8	V
		$I_{PP}=8\text{A}, t_p=8/20\mu\text{s}$	-	-	12	V
C_J	Junction Capacitance	$V_R=0\text{V}, f=1\text{ MHz}$	-	10	-	pF

Typical Characteristics

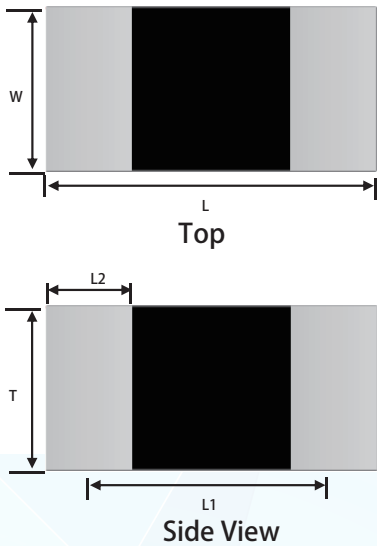


Clamping Voltage vs. Peak Pulse Current ($t_p = 8/20\text{ }\mu\text{s}$)

Power Derating Curve

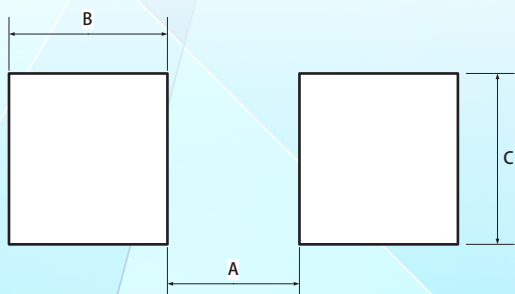


Physical Dimensions(mm.)



Symbol	Dimensions In Millimeters			Dimensions In Inches		
	Min	Nom	Max	Min	Nom	Max
W	0.45	0.55	0.65	0.018	0.022	0.026
L	0.95	1.00	1.05	0.038	0.040	0.042
T	0.45	0.55	0.65	0.018	0.022	0.026
L1	0.75 BSC			0.030 BSC		
L2	0.15	0.20	0.25	0.006	0.008	0.010

Suggested Land Pattern

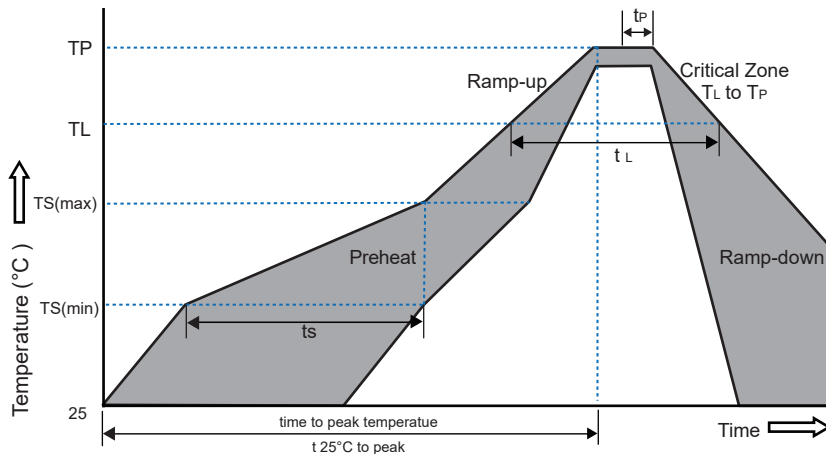


Symbol	Dimensions Millimeters	
	Min.	Max.
A	0.40	0.60
B	0.50	0.70
C	0.60	0.70

Packaging Quantity

Part Number	Size(mm)	Delivery Form	Delivery Quantity
JES0402-5V-C	1.0x0.6x0.5	7" T&R	10,000

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 S0402 - 5V - C

