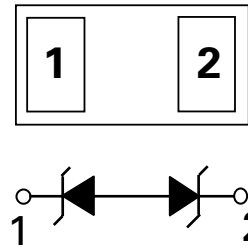
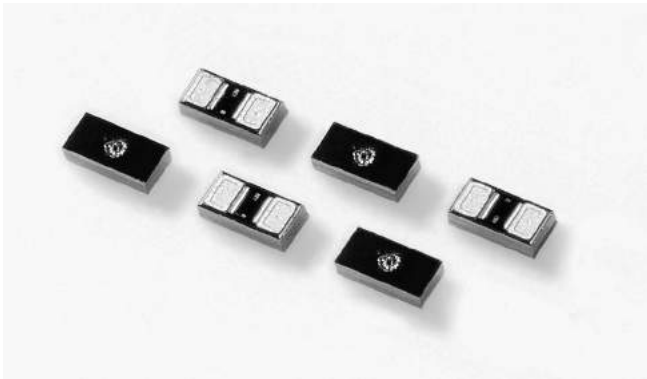


PROTECTION PRODUCTS
Feature:

- ESD, IEC61000-4-2, $\pm 30\text{kV}$ contact, $\pm 30\text{kV}$ air
- EFT, IEC61000-4-4, 40A(5/50ns)
- IEC 61000-4-5, 2ndEdition: 8/20 Surge, 10A Surge Immunity
- Low capacitance of 30pF(@ VR=0V)
- Low leakage current of 0.1 μA at 5V
- Space efficient 0201 footprint
- Halogen free, lead-free and RoHS compliant.

Application:

- Mobile phones
- Smart phones
- Camcorders
- PDA
- Digital cameras
- MP3/PMP
- Portable navigation devices
- Portable medical
- Point of sale terminals

Circuit Diagram & Pin Configuration:

DEVICE MARKING AND ORDERING INFORMATION

Device	Package	Shipping
ESD1009-02	0201	10000/Tape&Reel

Ordering Information per line@25°C(unless otherwise specified)

Parameter	Symbol	Rating	Unit
Peak pulse power (tp = 8/20μs)	Ppk	200	W
ESD Protection – Contact Discharge, per IEC 61000-4-2	VESD_CONTACT	± 30	kV
ESD Protection – Air Discharge, per IEC 61000-4-2	VESD_AIR	± 30	
Junction temperature	TJ	125	°C
Operating temperature	TOP	-40~85	°C
Lead temperature	TL	260	°C
Storage temperature	TSTG	-55~150	°C

Electrical Characteristics per line@25°C(unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Working Voltage	VRWM	—	—	6.0	V	
Reverse Breakdown Voltage	VBR	7.0	8.5	9.5	V	IR = 1mA,
Reverse Leakage Current	IR	—	0.1	0.5	uA	VR = 5.0V,
Clamping Voltage	VC	—	9.3	—	V	I _{PP} = 1.0A, 8/20μs,
Clamping Voltage	VC	—	10.0	—	V	I _{PP} = 2.0A, 8/20μs,
Clamping Voltage	VC	—	15.6	—	V	I _{PP} = 10A, 8/20μs,
Junction Capacitance	CJ	—	30	—	pF	VR = 0V, f = 1MHz, Any I/O pin to Ground

Note: Electrical parameters are only for die, performance may alter after assembly.

Typical Characteristics

Fig 1. 8/20 ms pulse waveform according to IEC 61000-4-5

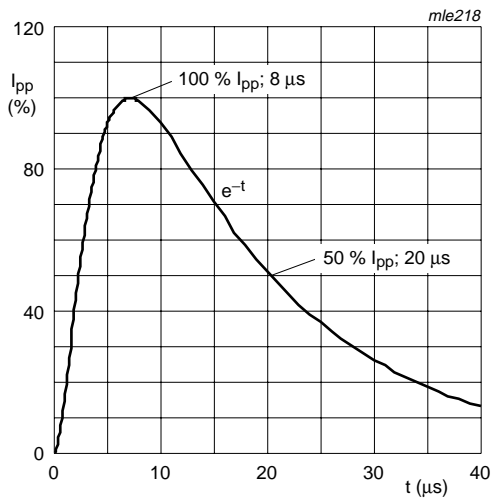
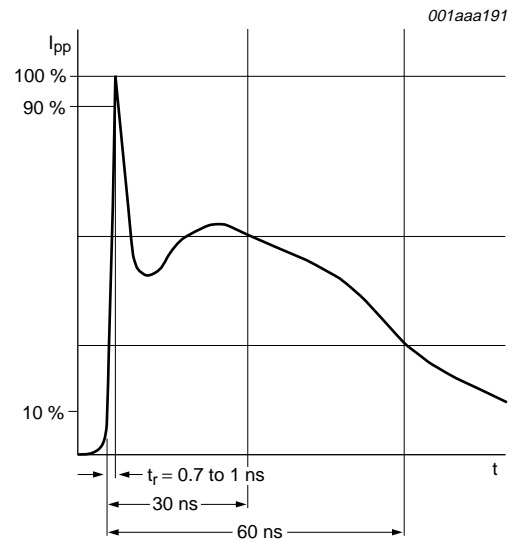
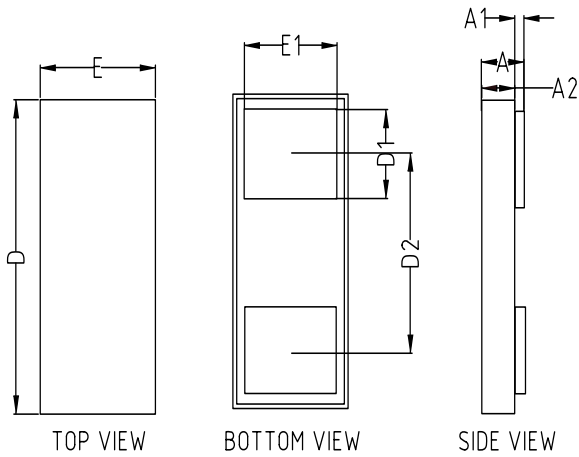
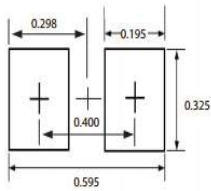


Fig 2. ElectroStatic Discharge (ESD) pulse waveform according to IEC 61000-4-2



Package Dimensions — 0201 Flipchip


Symbol	0201 Flipchip			
	Millimeters		Inches	
	Min	Max	Min	Max
D	0.605	0.655	0.023819	0.025787
E	0.305	0.355	0.012008	0.013976
D1	0.145	0.155	0.005709	0.006102
E1	0.245	0.255	0.009646	0.010039
D2	0.4 BSC		0.0157 BSC	
A	0.273	0.329	0.010748	0.012953
A2	0.265	0.315	0.010433	0.012402
A1	0.008	0.014	0.000315	0.000551



Recommended Soldering Pad Layout (mm)

NOTICE

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