

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

DESCRIPTION

The ESDxxx-C Series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, 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 small size, it is suited for use in cellular phones, portable devices, digital cameras, power supplies and many other portable applications.

FEATURES

- IEC61000-4-2 Level 4 ESD Protection
- Protects one directional I/O line
- Low clamping voltage
- Low Leakage Current
- Flammability Rating: UL 94V-0

APPLICATIONS

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers
- Peripherals

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-523	3K	7 inch

ORDER INFORMATION

Part Number	Type
ESDxxx-C Series	Lead (Pb)-free and Halogen-free

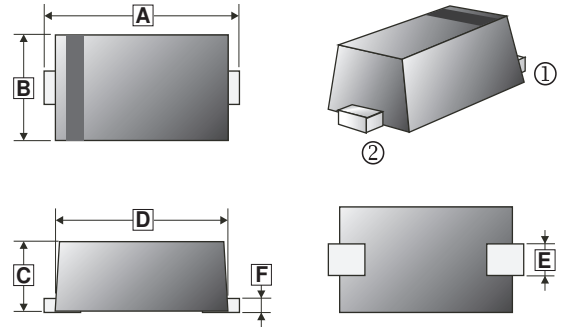
ABSOLUTE MAXIMUM RATING

Parameter		Symbol	Ratings	Unit
IEC61000-4-2 ESD Voltage	Air Model	V _{ESD}	±30	kV
	Contact Model		±22	
ESD Voltage	Per Human Body Model		±16	
	Machine Model		±0.4	
Total Power Dissipation on FR-5 Board ¹ @T _A =25°C		P _D	150	mW
Maximum Lead Solder Temperature (10 Second Duration)		T _L	260	°C
Operating Junction Temperature		T _J	-55~150	
Storage Temperature Range		T _{STG}	-55~150	

Note:

1. FR-5=1.0x0.75x0.62 in.

SOD-523



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.50	1.70	D	1.10	1.30
B	0.70	0.90	E	0.25	0.40
C	0.50	0.77	F	-	0.20



ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Part Number	Marking	V_{RWM} (V)		V_B (V)	I_r (mA)	I_R (μA)	V_C (V)			P_{PK} (W)	C_J (pF)
		Max.	Min.				Max.	@A	Max.		
ESD2V5-C	ZD□	2.5	4	1	6	9	5	11.5	9	104	145
ESD3V3-C	ZE□	3.3	5	1	0.9	10	5	14	7.5	105	105
ESD5V0-C	ZF□	5	6.2	1	0.08	11.6	5	15	7	105	80
ESD6V0-C	ZG□	6	6.8	1	0.05	13.5	5	17	6	105	70
ESD7V0-C	ZH□	7	7.5	1	0.03	14	5	18	6	108	65
ESD12V-C	ZM□	12	14.1	1	0.03	20	1	26	4	104	45
ESD15V-C	ZN□	15	16	1	0.5	23	1	30	4	120	28

*□= Production Line Indication

ELECTRICAL CHARACTERISTICS CURVE

Fig 1 8/20 μs Waveform per IEC61000-4-5

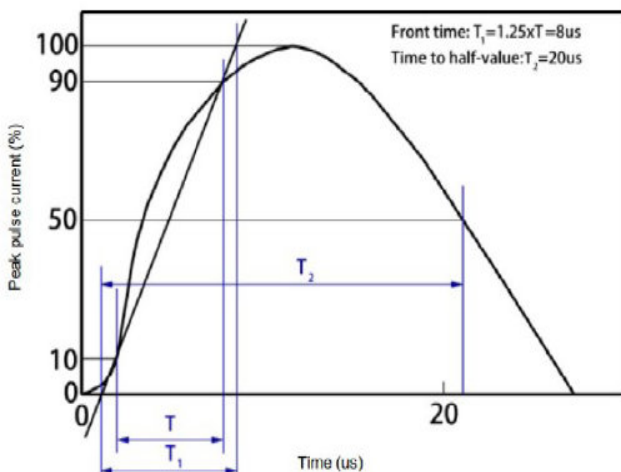


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2

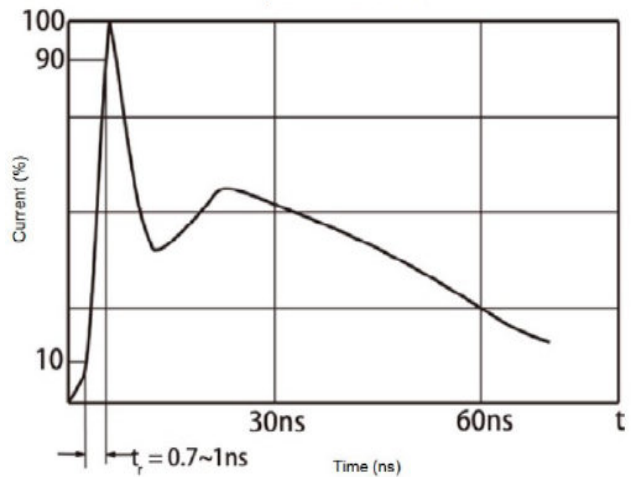


Fig 3 Voltage vs Capacitance

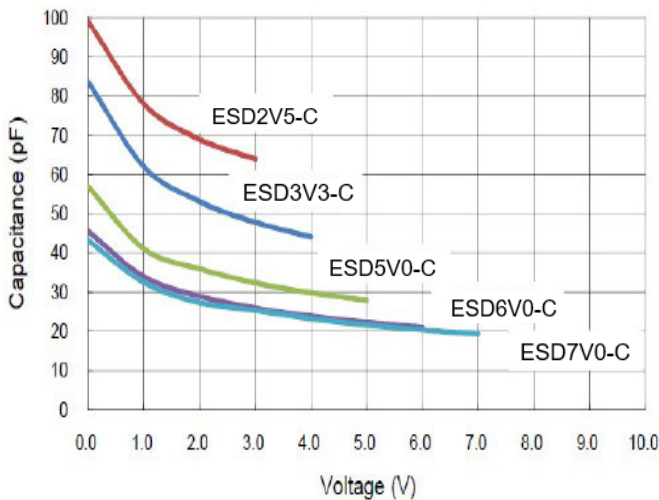
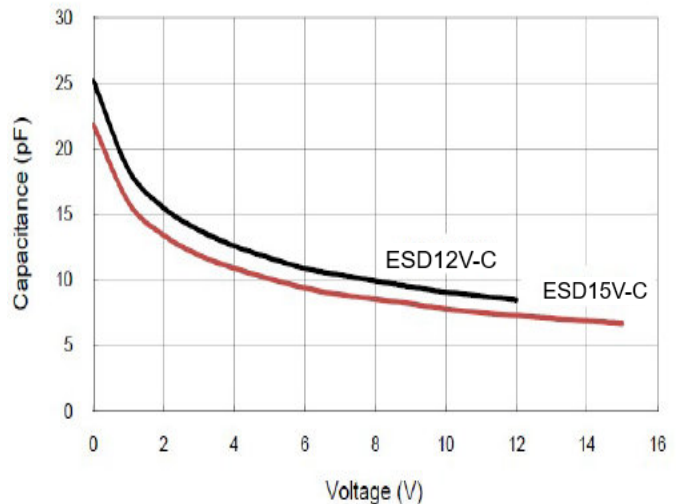


Fig 4 Voltage vs Capacitance



ELECTRICAL CHARACTERISTICS CURVE

Fig 5 Clamping Voltage vs Peak Pulse Current

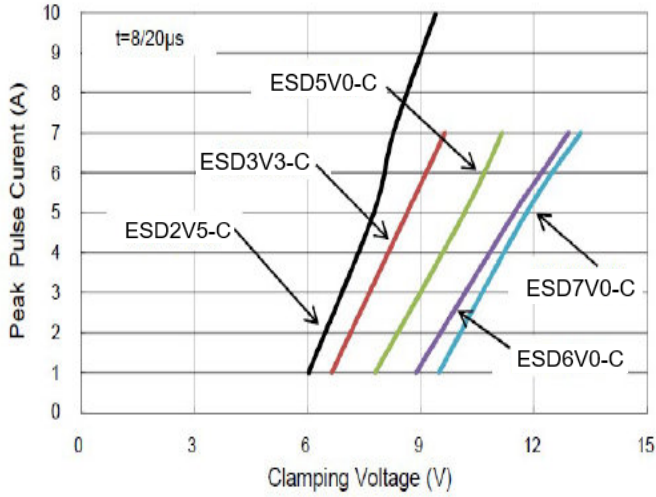


Fig 6 Clamping Voltage vs Peak Pulse Current

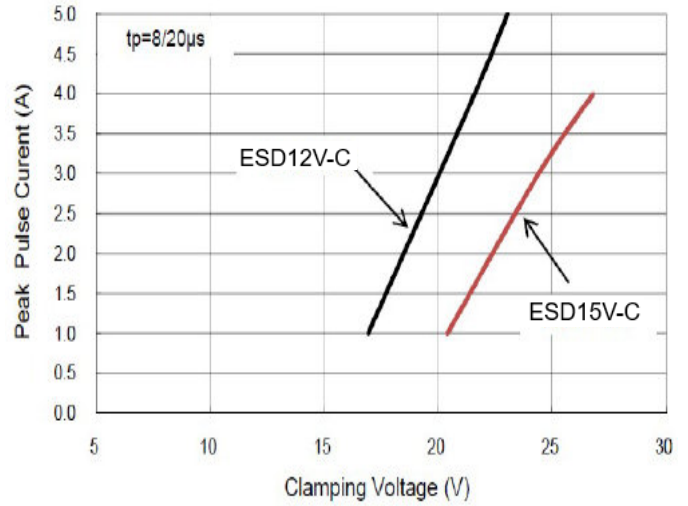
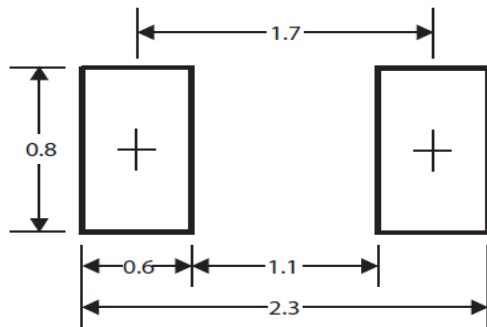


Fig 7 Mounting Pad Layout



*Dimensions in millimeters