Elektronische Bauelemente

SD03CL-C~SD24CL-C

Voltage 3V~24V

350W Plastic Encapsulate ESD Protection Diodes

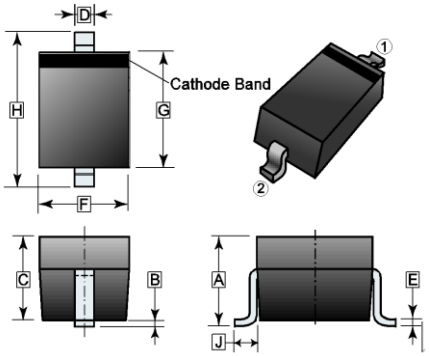
RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

DESCRIPTION

This series are ultra-low capacitance transient voltage suppressor arrays, designed to protect applications such as portable electronics and SMART phones. This series is available in bidirectional configurations and is rated at 350 Watts for an 8/20μs wave shape.

This series meets IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This series offers ultra-low capacitance and low leakage current in a miniature SOD-323 package.

SOD-323



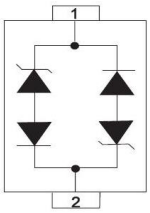
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.05 REF.		F	1.10	1.50
B	0.07 REF.		G	1.50	1.95
C	0.80	1.10	H	2.30	2.80
D	0.25	0.40	J	0.475 REF.	
E	0.05	0.25			

FEATURES

- Transient protection for high-speed data lines
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- Protects one I/O line (bidirectional)
- Low clamping voltage
- Low leakage current
- Response time<1ns

MECHANICAL DATA

- Case: SOD-323
- Flammability Rating: UL 94V-0
- High Temperature Soldering Guaranted: 260°C/10s
- MSL1



Top View

MARKING

Part Number	SD03CL-C	SD05CL-C	SD08CL-C
Marking	CC	AC	BC
Part Number	SD12CL-C	SD15CL-C	SD24CL-C
Marking	DC	EC	HC

PACKAGE INFORMATION

Package	**MPQ**	**Leader Size**
SOD-323	3K	7 inch

MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter		**Symbol**	**Value**	**Unit**
ESD per IEC 61000-4-2	Air	V_{ESD}	±30	kV
	Contact		±30	
Peak Pulse Power (tp=8/20μs)		P_{PP}	350	W
Lead Soldering Temperature		T_L	260	°C
Operating Temperature Range		T_{OPT}	-55~150	
Storage Temperature Range		T_{STG}	-55~150	

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ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Part Number	Rated-Stand-off Voltage	Reverse Breakdown Voltage		Maximum Clamping Voltage @8/20μs P_{PP}					Leakage Current	Capacitance
	V_{RWM}	V_{BR} @I_T		V_C @1A	V_C @I_{PP}				I_R @V_{RWM}	C_T
	Max.	Min.	I_T		Max.	I_{PP}	Max.	I_{PP}	Max.	Typ.
	V	V	mA	V	V	A	V	A	μA	pF
SD03CL-C	3	4	1	7	13.9	8	20	20	5	0.8
SD05CL-C	5	6	1	9.8	18.3	8	20	18	1	0.8
SD08CL-C	8	8.5	1	13.4	18.5	8	24	18	1	0.8
SD12CL-C	12	13.3	1	19	24	6	28.6	12	1	0.8
SD15CL-C	15	16.7	1	24	29	5	31.8	10	1	0.8
SD24CL-C	24	26.7	1	43	45	3	56	6	1	0.8

CHARACTERISTICS CURVES

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

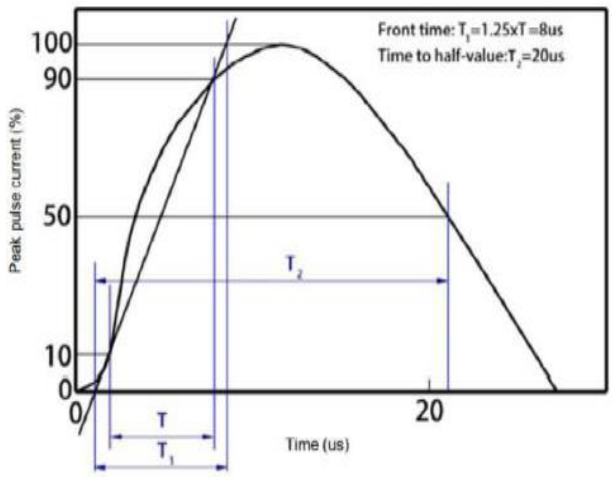


Fig 2 Contact Discharge Current Waveform per IEC61000-4-2

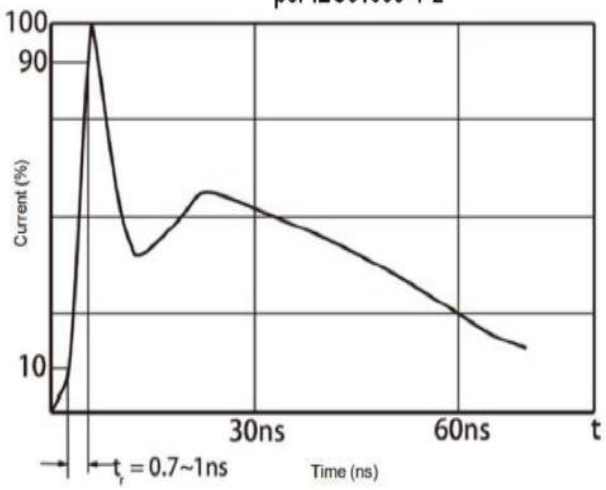


Fig 3 Voltage vs Capacitance

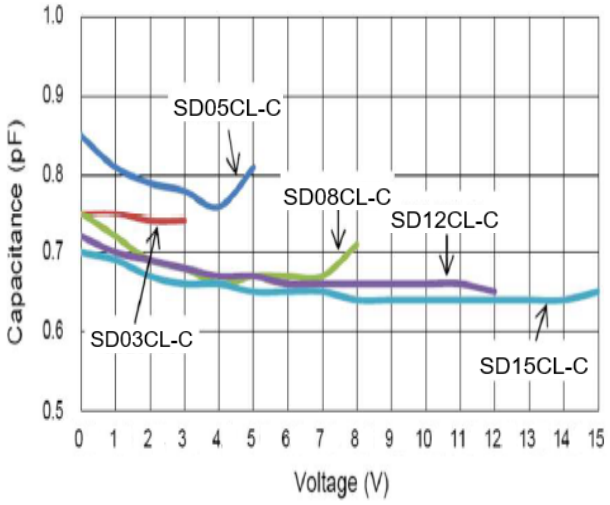
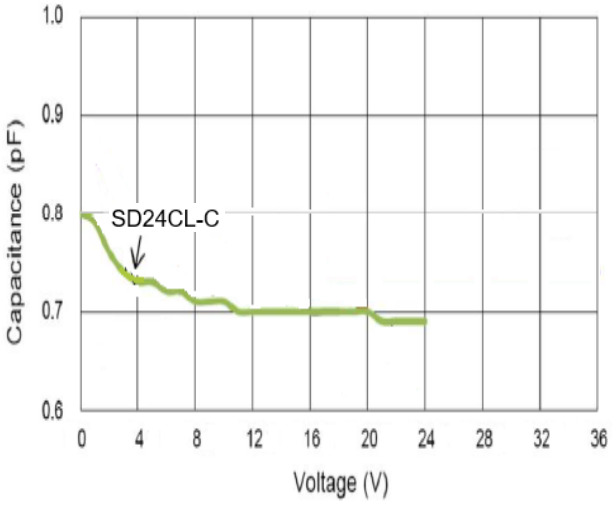


Fig 4 Voltage vs Capacitance



CHARACTERISTICS CURVES

Fig 5 Clamping Voltage vs Peak Pulse Current

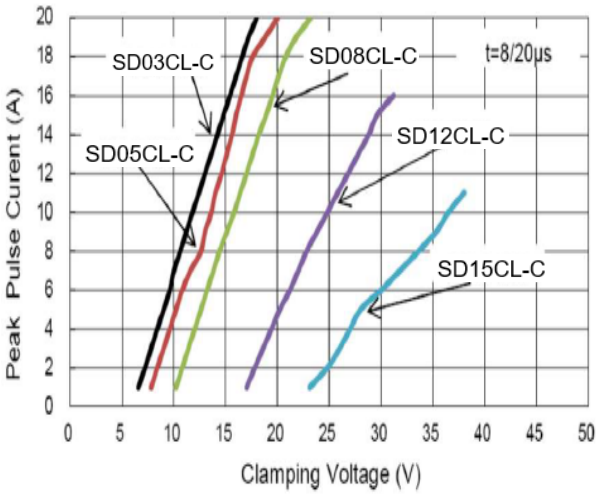


Fig 6 Clamping Voltage vs Peak Pulse Current

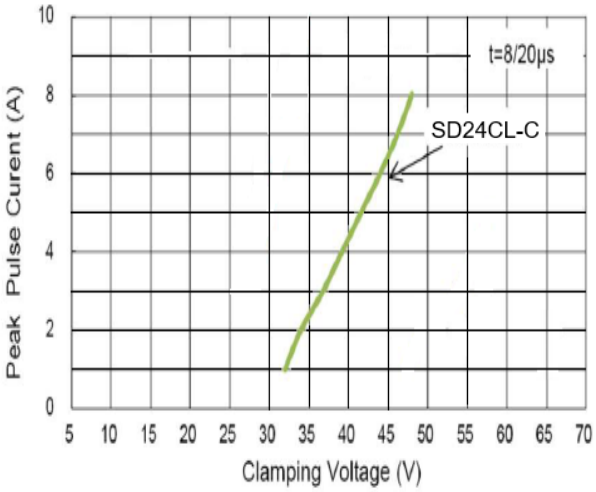
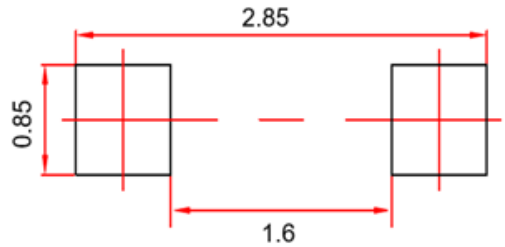


Fig 7 Mounting Pad Layout



*Dimensions in millimeters