Elektronische Bauelemente

ESDL05R

8W, 5V

Low Capacitance ESD Protection

RoHS Compliant Product

A suffix of “-C” specifies halogen and lead-free

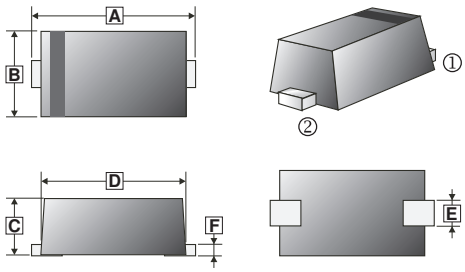
DESCRIPTION

The ESDL05R is an ESD transient voltage suppression component which provides a very high level of protection for sensitive electronic components that may be subjected to electrostatic discharge (ESD). It is particularly well-suited for cellular phones, portable device, digital cameras, power supplies and many other portable applications because of its small package and low weight.

The ESDL05R is Uni-directional, Safely dissipate ESD strikes of Level 4, IEC61000-4-2, exceeding the maximum requirement. Using the MILSTD-883 (Method 3015) specification for Human Body Model (HBM) ESD, the device provides protection for contact discharges to greater than +/-10KV.

The ESDL05R is available in a SOD-523 package with peak reverse working voltage of 5 voltages.

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	0.35
C	0.50	0.77	F	0.07	0.20

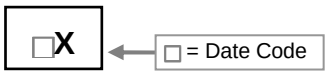
APPLICATIONS

- Digital Cameras
- Portable Instrumentation
- Notebooks, Desktops, and Serves
- Personal Digital Assistants (PDAs)
- Cell phone handsets and accessories

FEATURES

- low clamping voltage
- Low leakage current
- Small package

MARKING



PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-523	3K	7 inch

ABSOLUTE MAXIMUM RATINGS (T_A=25℃ unless otherwise specified)

Rating		Symbol	Value	Unit
IEC 61000-4-2 (ESD)	Air contact		±15	kV
	Contact discharge		±10	
Maximum peak pulse current (tp=8/20us)		I_{PP}	9	A
Storage temperature range		T_J, T_{STG}	-55 ~ 150	℃
Lead temperature		T_L	260	℃

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted, V_F=1V Max. @ I_F=10 mA for all types)

Device	V_{RWM} (V)	I_R(µA) @ V_{RWM}	V_{BR} (V) @ I_T [1]	I_T	V_C (V) @ I_{PP}=1A	V_C	C (pF)	
	Max.	Max.	Min.	mA	Max.	Per IEC61000−4−2	Typ.	Max.
ESDL05R	5	1	6.2	1	8	Figures 2 & 3 See Below	0.5	0.9

Note:
1. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

RATINGS AND CHARACTERISTICS CURVES

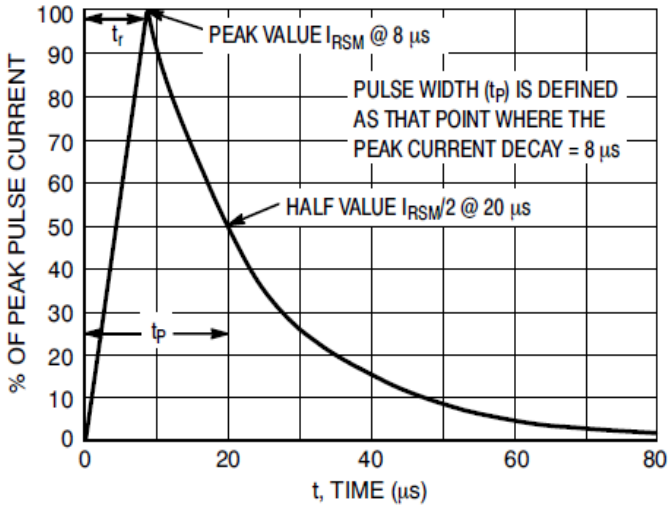


Figure 1. 8 X 20 µs Pulse Waveform

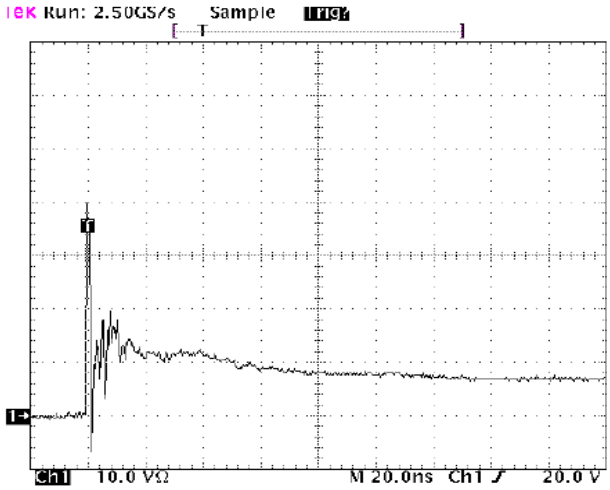


Figure 2. ESD Clamping Voltage Screenshot
Positive 8 kV Contact per IEC61000−4−2

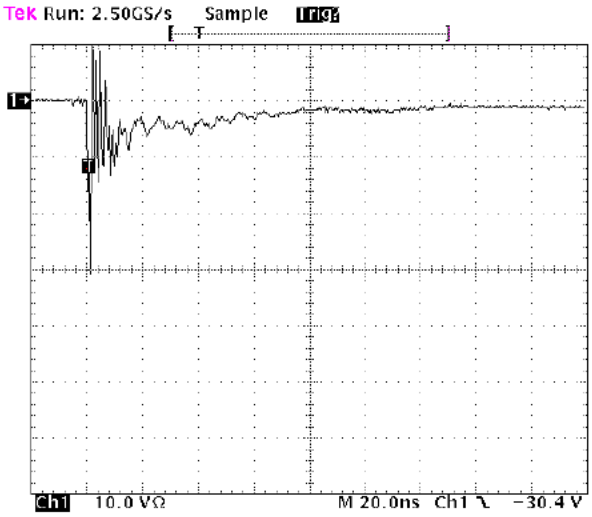


Figure 3. ESD Clamping Voltage Screenshot
Negative 8 kV Contact per IEC61000−4−2

RATINGS AND CHARACTERISTICS CURVES

IEC 61000-4-2 Spec.

Level	Test Voltage (kV)	First Peak Current (A)	Current at 30 ns (A)	Current at 60 ns (A)
1	2	7.5	4	2
2	4	15	8	4
3	6	22.5	12	6
4	8	30	16	8

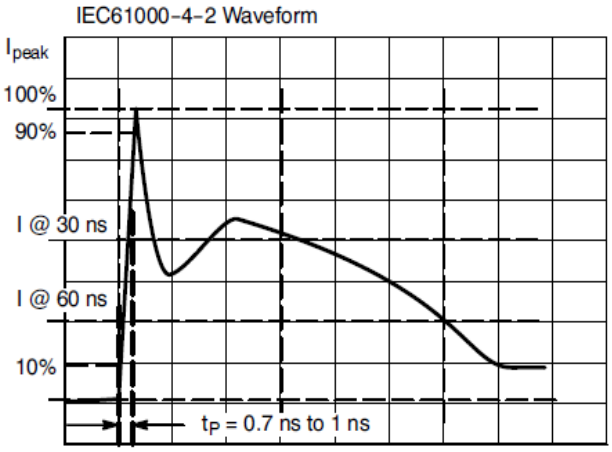


Figure 4. IEC61000-4-2 Spec