

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

DESCRIPTION

The ESDL05C is designed to protect voltage sensitive electronic components from ESD and transients 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 where board space comes at a premium. Also because of its low capacitance, it is suited for use in high frequency designs such as USB 2.0 high speed ,VGA, DVI, SDI and other high speed line applications.

FEATURES

- IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- Peak power dissipation: 80W (8/20 μs)
- Protects one directional I/O line
- Low clamping voltage
- Working voltages : 5V
- Low leakage current
- Low capacitance

APPLICATIONS

- High Speed Line :USB1.0/2.0, VGA, DVI, SDI,
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV
- Cellular handsets and accessories
- Portable instrumentation
- Peripherals

MARKING

LB

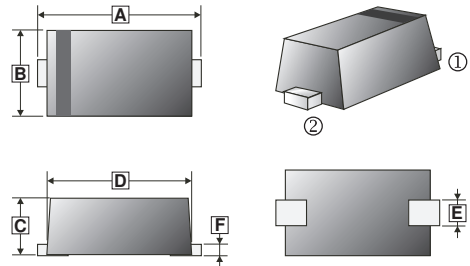
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-523	3K	7 inch

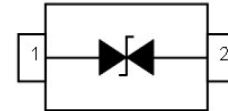
ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter		Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage	Air Model	V _{ESD}	± 15	KV
	Contact Model		± 8	
Peak Pulse Power	8/20us	P _{PP}	80	W
Operating and Storage Temperature Range		T _J , T _{STG}	-55 ~ +150	°C

SOD-523



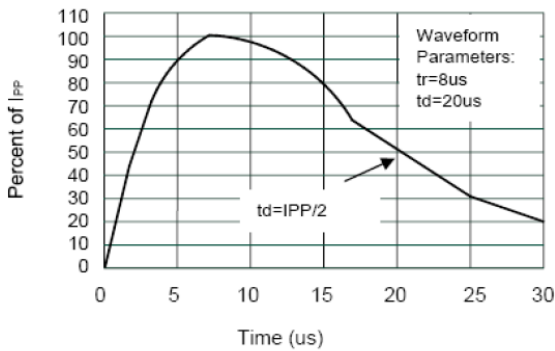
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.50	1.70	D	1.10	1.30
B	0.70	0.90	E	0.25	0.35
C	0.50	0.77	F	0.07	0.20



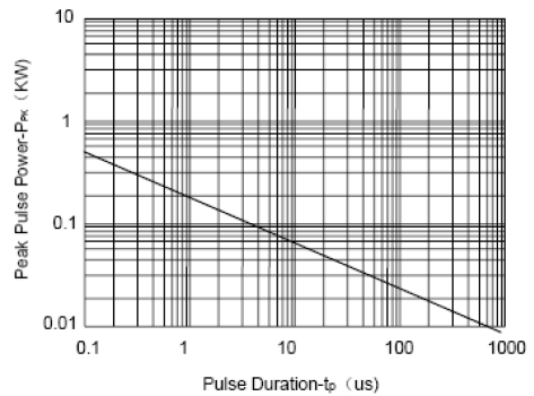
ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Working Voltage	V_{RWM}	-	-	5	V	
Reverse Breakdown Voltage	V_{BR}	5.2	-	8	V	$I_T=1\text{mA}$
Reverse Leakage Current	I_R	-	-	2.0	μA	$V_{RWM}=5\text{V}$
Clamping Voltage	V_C	-	-	9	V	$I_{PP}=1\text{A}$, $t_p=8/20\mu\text{s}$
Junction Capacitance	C_J	-	4.5	6	pF	$V_R=0\text{V}$, $f=1\text{MHz}$

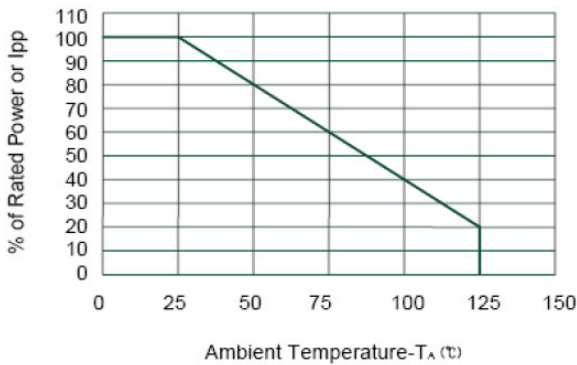
RATINGS AND CHARACTERISTICS CURVES



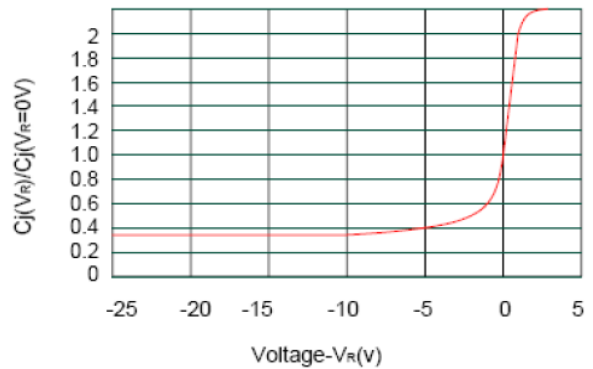
Pulse Waveform



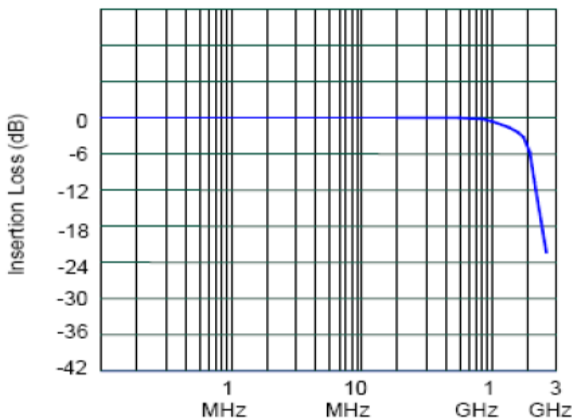
Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve



Junction Capacitance vs. Reverse Voltage



Insertion Loss S21