

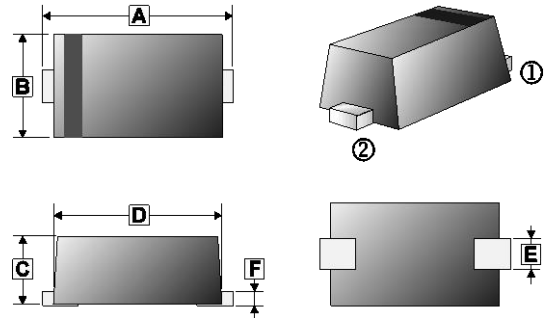
RoHS Compliant Product  
 A suffix of "-C" specifies halogen and lead-free

**DESCRIPTION**

The ESDK03C-C 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.

This device has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).

**SOD-523**



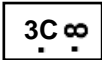
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.50	1.70	D	1.10	1.30
B	0.70	0.90	E	0.25	0.40
C	0.50	0.77	F	-	0.20



**FEATURES**

- Peak Power Dissipation: 60W (8/20µs)
- Working Voltages: 3.3V
- Protects One I/O Line
- Low Clamping Voltage
- Low Leakage Current

**MARKING**

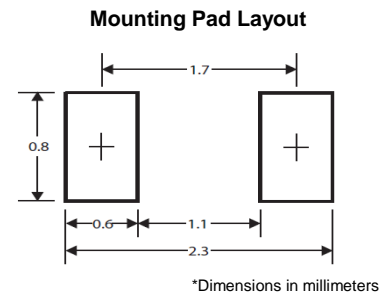


**PACKAGE INFORMATION**

Package	MPQ	Leader Size
SOD-523	3K	7 inch

**ORDER INFORMATION**

Part Number	Type
ESDK03C-C	Lead (Pb)-free and Halogen-free



**ABSOLUTE MAXIMUM RATINGS** (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
IEC 61000-4-2 ESD Voltage	Air Model	±30	kV
	Contact Model	±30	
Peak Pulse Power @tp=8/20µs	P <sub>PP</sub>	60	W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	150, -40~150	°C

**ELECTRICAL CHARACTERISTICS** (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Stand-off Voltage	V <sub>RWM</sub>	-	-	3.3	V	
Breakdown Voltage	V <sub>(BR)</sub>	3.6	-	-	V	I <sub>T</sub> =1mA
Reverse Leakage Current	I <sub>R</sub>	-	-	1	µA	V <sub>RWM</sub> =5V
Clamping Voltage @tp=8/20µs	V <sub>C</sub>	-	-	6.5	V	I <sub>PP</sub> =1A
		-	-	12		I <sub>PP</sub> =5A
TLP Clamping Voltage		-	9	-		I <sub>PP</sub> =16A, IEC61000-4-2 Level 4 equivalent (±8kV Contact, ±15kV Air)
Junction Capacitance	C <sub>J</sub>	-	16.5	-	pF	V <sub>R</sub> =0V, f=1MHz

**RATINGS AND CHARACTERISTICS CURVES**

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

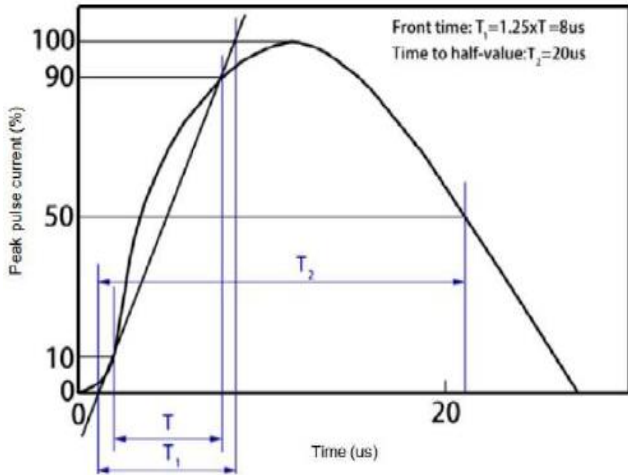


Fig 3 Power Derating Curve

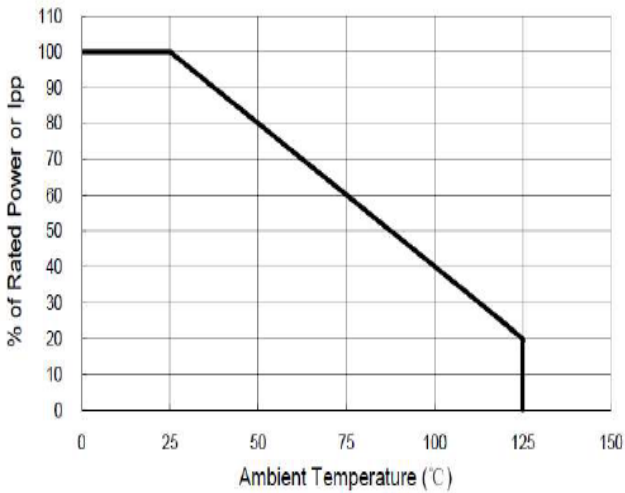


Fig 5 Transmission Line Pulsing (TLP) Measurement

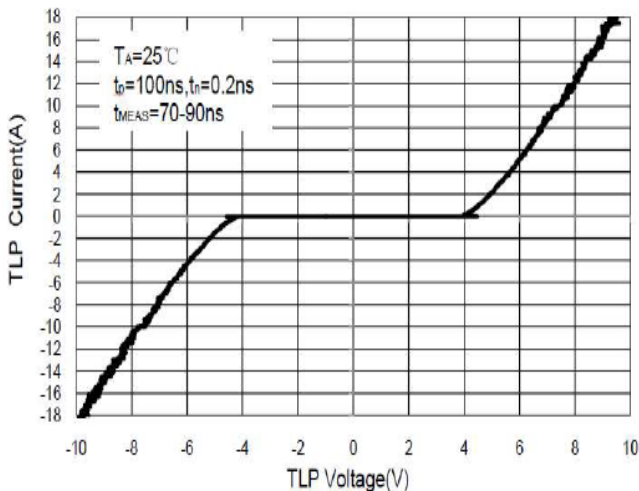


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2)

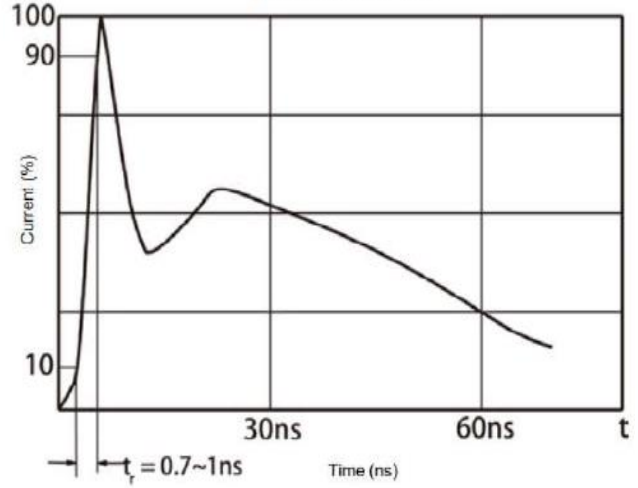


Fig 4 Voltage vs Capacitance

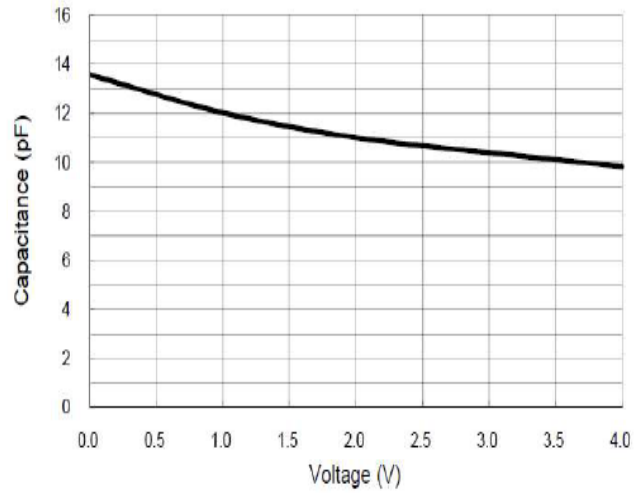


Fig 6 Clamping Voltage vs Peak Pulse Current

