Elektronische Bauelemente

SDK05C-C

60W, 5V

ESD Protection (Bi-Directional)

RoHS Compliant Product

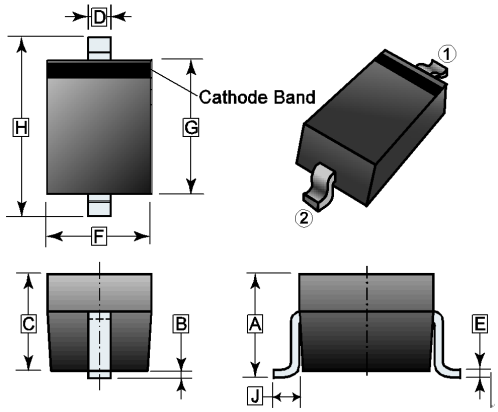
A suffix of "-C" specifies halogen and lead-free

DESCRIPTION

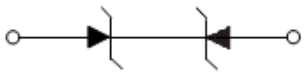
The SDK05C-C is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

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-323



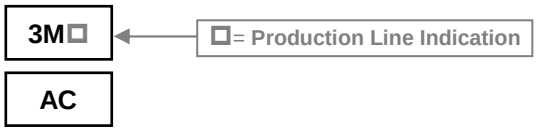
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.05 REF.		F	1.10	1.50
B	0.07 REF.		G	1.50	1.95
C	0.80	1.10	H	2.30	2.80
D	0.25	0.40	J	0.475 REF.	
E	0.05	0.25			



FEATURES

- Peak Power Dissipation: 60W (8/20μs)
- Working Voltages: 5V
- Protects One I/O Line
- Low Clamping Voltage
- Low Leakage Current

MARKING



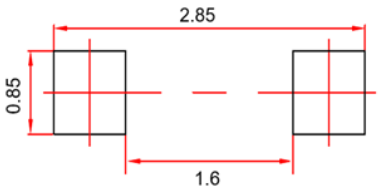
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-323	3K	7 inch

ORDER INFORMATION

Part Number	Type
SDK05C-C	Lead (Pb)-free and Halogen-free

Mounting Pad Layout



*Dimensions in millimeters

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

Parameter		Symbol	Ratings	Unit
IEC 61000-4-2 ESD Voltage [1]	Air Model	V_{ESD}	±30	kV
	Contact Model		±30	
Peak Pulse Power [2] @tp=8/20μs		P_{PP}	60	W
Junction and Storage Temperature Range		T_J, T_{STG}	150, -55~150	℃

ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Stand-off Voltage	V_{RWM}	-	-	5	V	
Breakdown Voltage	$V_{(BR)}$	5.6	-	7.8	V	I_T=1mA
Reverse Leakage Current	I_R	-	-	1	μA	V_{RWM}=5V
Clamping Voltage	V_C	-	-	12	V	I_{PP}=5A, tp=8/20μs
Junction Capacitance	C_J	-	18	-	pF	V_R=0V, f=1MHz

TYPICAL CHARACTERISTICS

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

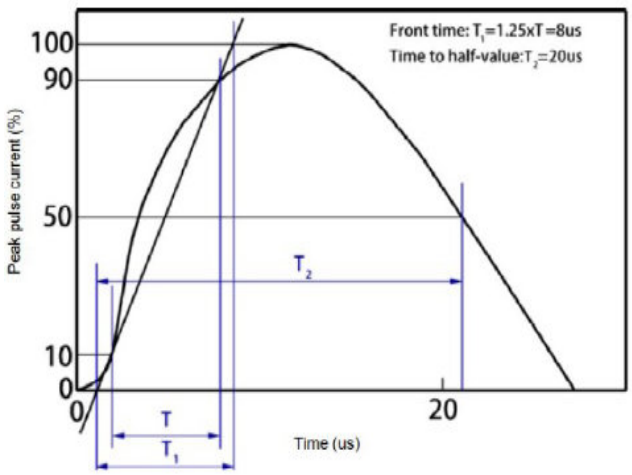


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2)

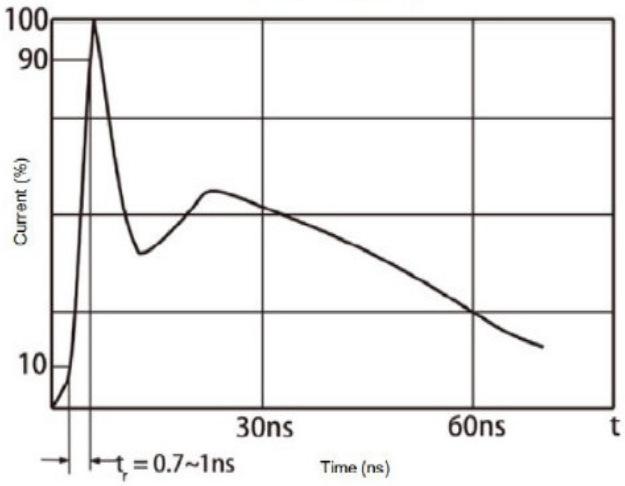


Fig 3 Power Derating Curve

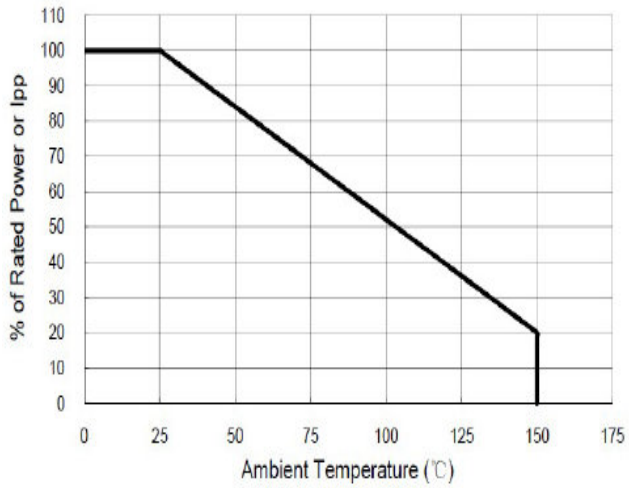


Fig 4 Voltage vs Capacitance

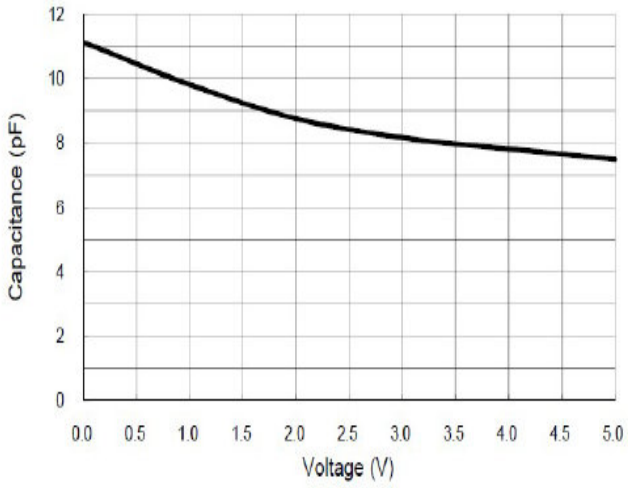


Fig 5 Voltage Sweeping

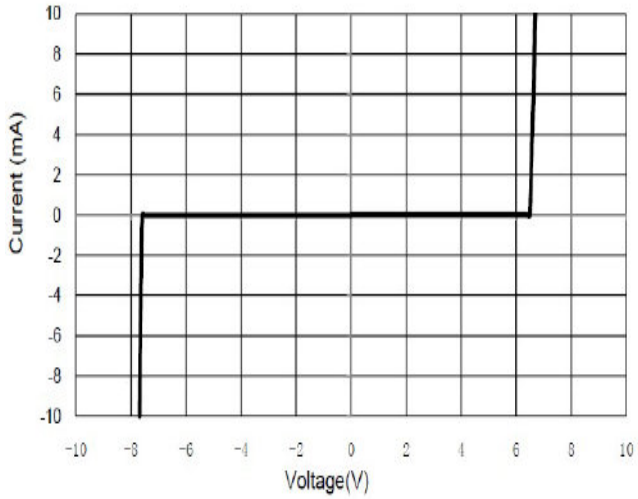


Fig 6 Clamping Voltage vs Peak Pulse Current