Elektronische Bauelemente

KS05B4

VOLTAGE: 5.0 V

Ulta Low Capacitance double rail-to-rail ESD protection diode

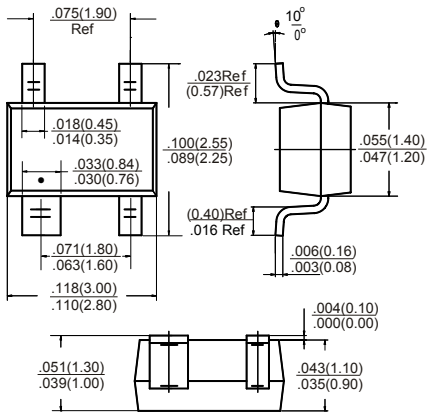
RoHS Compliant Product

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

DESCRIPTION

. Low Capacitance rail-to-rail ESD protection in a small package designed to protect. two hi-speed data line or high-frequency signal lines from the damage caused by ESD and other transients.

SOT-143



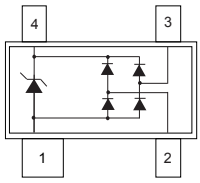
Dimensions in inches and (millimeters)

FEATURES

. Response time is typically < 1 ns
. Low leakage
. Stand-off voltage:5.0V
. IEC61000-4-2 level 4 ESD protection
. Ulta Low Capacitance : 1pF (I/O to ground)

APPLICATION

. Digital Video Interface (DVI)/ High Definition Multimedia Interface (HDMI) interfaces.
. Wide Area Network (WAN)/ Local Area Network(LAN) systems.
. Cellular phones, MP3 players, digital cameras ... etc.
. Suitable for electronics where board space is a major design consideration.



MAXIMUM RATINGS

Rating 25°C ambient temperature unless otherwise specified.

PARAMETER		SYMBOL	LIMITS	UNITS
IEC61000-4-2, Level 4(ESD)	Air Contact	V_{ESD}	>16 >8	kV
Lead Solder Temperature - Max. (10 sec duration)		T_L	260	°C
Junction Temperature Range		T_J	-55 ~ +125	°C
Storage Temperature Range		T_{STG}	-55 ~ +125	°C

Stresses exceeding "Maximum Ratings" may damage the device. "Maximum Ratings" are stress ratings only. Functional operation above the recommended. Operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

ELECTRICAL CHARACTERISTICS (T= 25 °C unless otherwise noted, Per Diode)

PARAMETER	SYMBOL	Min.	Typ.	Max.	UNIT	TEST CONDITIONS
Reverse Stand-Off Voltage	V_{RWM}	-	-	5.0	V	
Reverse Leakage Current	I_R	-	-	100	nA	V_{RWM} = 3V
Breakdown Voltage	V_{BR}	6.1	-	8.5	V	I_T = 1mA
Diode Capacitance	Cz	-	1	-	pF	F=1MHz,V_R=0V , Pin 2,3 to Pin1
	$C_{I/O}$	-	36	-		F=1MHz,V_R=0V , Pin 4 to Pin1
Forward Voltage	V_F	-	0.7	-	V	I_F=1mA

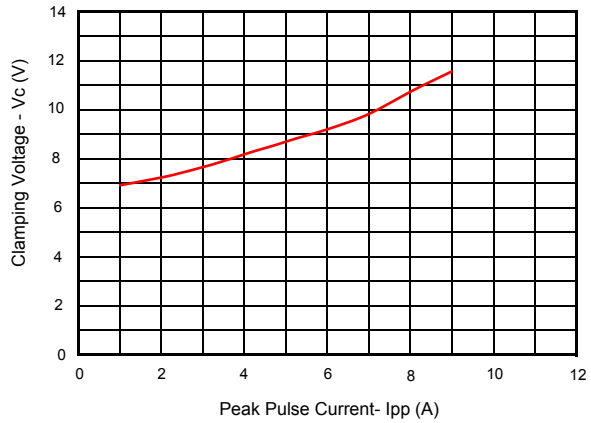
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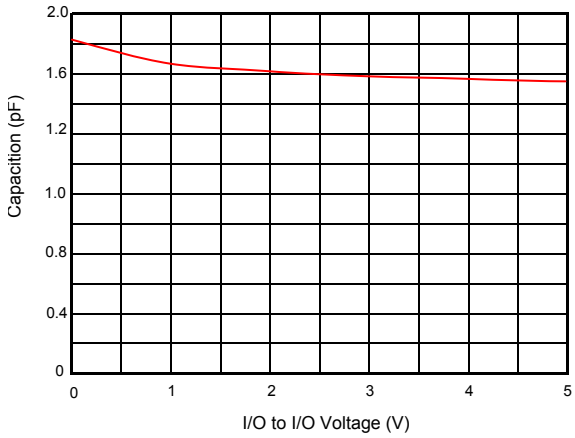
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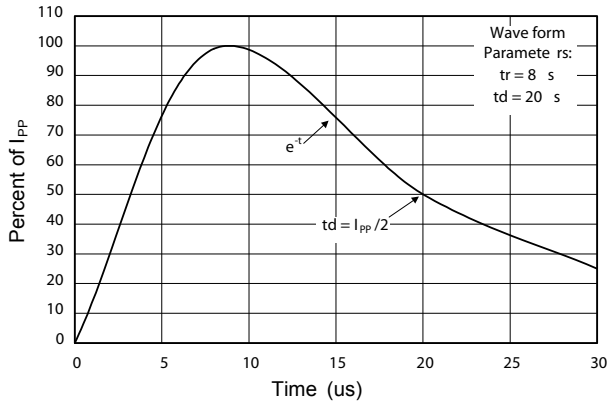
Clamping Voltage vs. Peak Pulse Current



Typical Capacitance vs. Voltage



Pulse Waveform



Recommended Pad Layout

