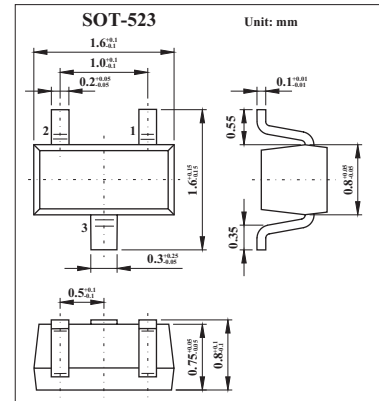
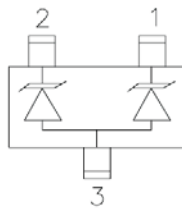


Ultra-Low Capacitance TVS for ESD and CDE Protection KClamp0502B

■ Features

- Designed to replace polymer TVS
- Protects up to two I/O lines
- Ultra-Low capacitance (<1pF)
- No insertion loss to >3.0GHz
- Low profile (<1mm)
- Low leakage current and clamping voltage



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Peak Pulse Power (tp = 8/20μs)	P _{pk}	125	W
Peak Pulse Current (tp = 8/20μs)	I _{PP}	5	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	15	KV
ESD per IEC 61000-4-2 (Contact)		8	
Operating Temperature	T _J	-55 to +125	°C
Storage Temperature	T _{STG}	-55 to +150	°C

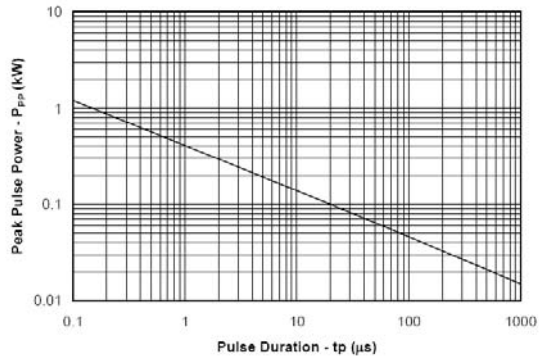
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	V _{RWM}	Pin 1 or Pin 2 to Pin 3 and Between Pins 1 and 2			5	V
Reverse Breakdown Voltage	V _{BR}	I _t = 1mA Pin 1 or Pin 2 to Pin 3 and Between Pins 1 and 2	6			V
Reverse Leakage Current	I _R	V _{RWM} = 5V, T=25°C Pin 1 or Pin 2 to Pin 3 and Between Pins 1 and 2			1	μA
Clamping Voltage	V _C	I _{PP} = 1A, tp = 8/20μs Pin 1 to Pin 2			15	V
Clamping Voltage	V _C	I _{PP} = 5A, tp = 8/20μs Pin 1 or Pin 2 to Pin 3			22	V
Clamping Voltage	V _C	I _{PP} = 5A, tp = 8/20μs Pin 1 to Pin 2			25	V
Junction Capacitance	C _j	V _R = 0V, f = 1MHz Pin 1 to Pin 2		0.60	0.9	pF
Junction Capacitance	C _j	V _R = 0V, f = 1MHz Pin 1 or Pin 2 to Pin 3			1..2	pF

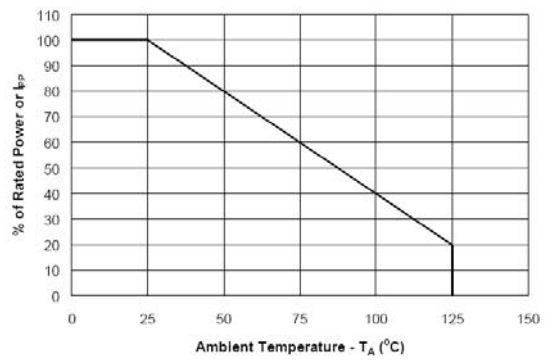
KClamp0502B

■ Typical Characteristics

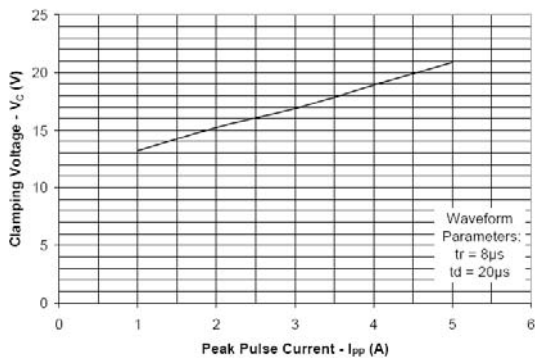
Non-Repetitive Peak Pulse Power vs. Pulse Time



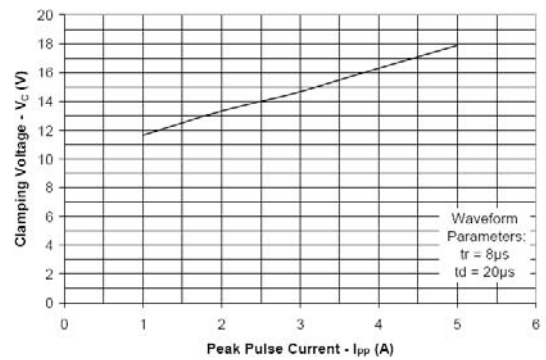
Power Derating Curve



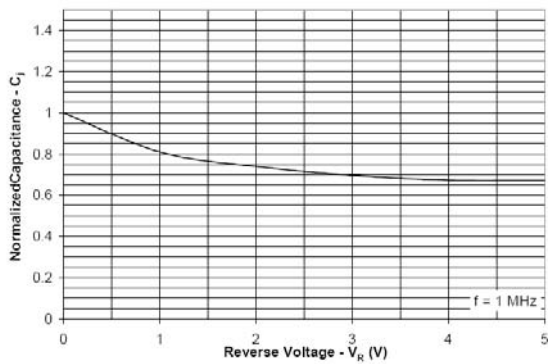
Clamping Voltage vs. Peak Pulse Current
Pin 1 to Pin 2



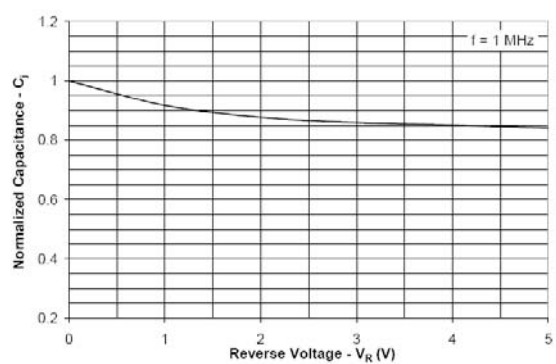
Clamping Voltage vs. Peak Pulse Current
Pin 1 or Pin 2 to Pin 3



Normalized Capacitance vs. Reverse Voltage
Pin 1 or Pin 2 to Pin 3

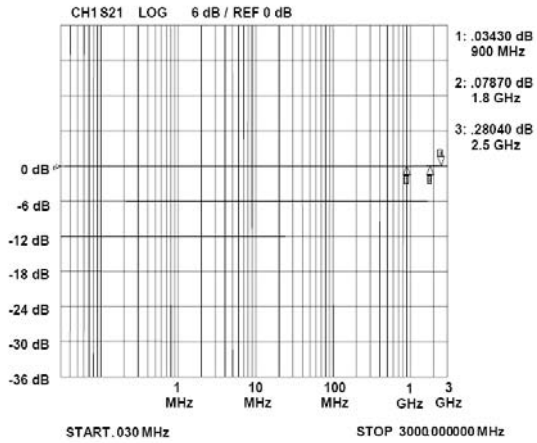


Normalized Capacitance vs. Reverse Voltage
Pin 1 to Pin 2

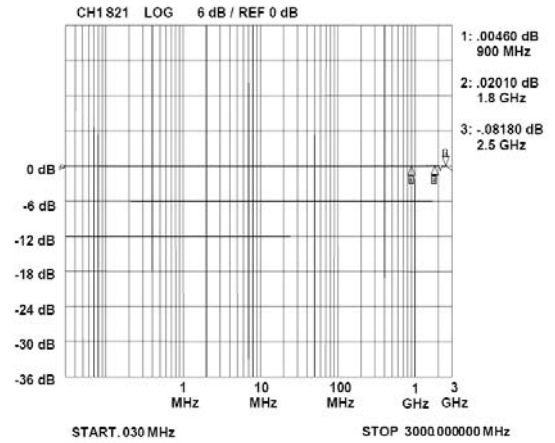


KClamp0502B

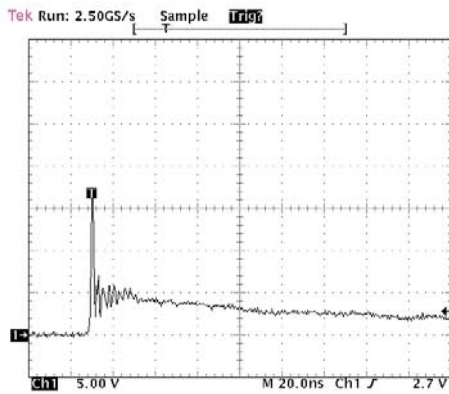
Insertion Loss S21 (Pin 1 to Pin 2)



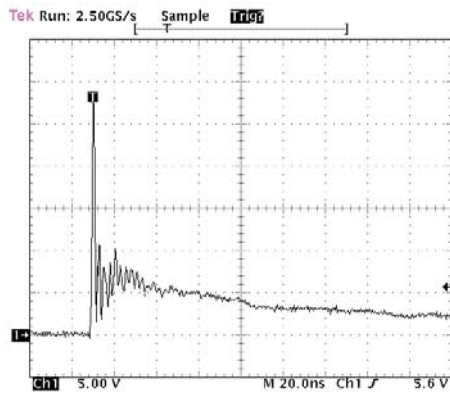
Insertion Loss S21 (Pin 1 or Pin 2 to Pin 3)



ESD Response (4kV Contact per IEC 61000-4-2)



ESD Response (8kV Contact per IEC 61000-4-2)



Analog Crosstalk

