

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

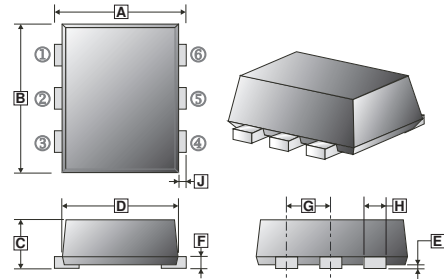
## DESCRIPTION

The KS05ML4 is a transient voltage suppressors (TVS) which provide a very high level protection for sensitive electronic components that may be subjected to electrostatic discharge (ESD). It is designed to replace multilayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

The KS05ML4 was past ESD transient voltage up to  $\pm 8\text{KV}$  (contact) according to IEC61000-4-2 and withstand peak current up to 2.8A for 8/20us pulse according to IEC61000-4-5.

The KS05ML4 is available in a SOT-563 package.  
Standard products are Pb-free and Halogen-free.

## SOT-563



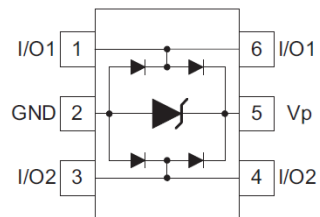
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.50	1.70	F	0.09	0.16
B	1.50	1.70	G	0.45	0.55
C	0.525	0.60	H	0.17	0.27
D	1.10	1.30	J	0.10	0.30
E	-	0.05			

## APPLICATIONS

- Digital Cameras
- Portable Instrumentation
- Notebooks, Desktops, and Servers
- Personal Digital Assistants (PDAs)
- Cell phone handsets and accessories

## FEATURES

- low clamping voltage
- Low leakage current
- Small package



Pin configuration (Top-View)

## MARKING



## PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-563	3K	7 inch

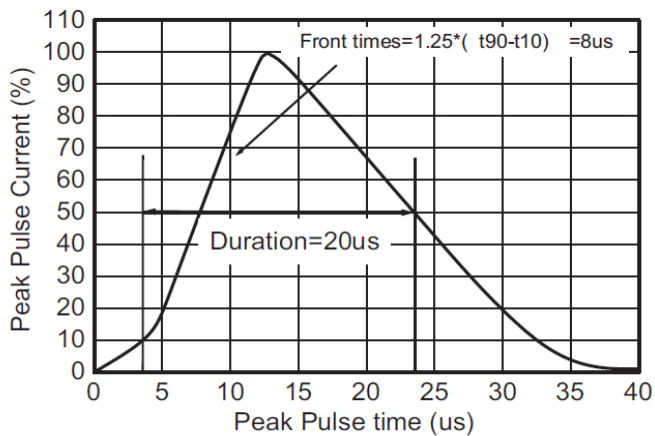
## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise specified)

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD)	Air contact	$\pm 15$	kV
	Contact discharge	$\pm 8$	
Peak pulse power (tp=8/20us)	P <sub>PK</sub>	36	W
Peak pulse current (tp=8/20us)	I <sub>PP</sub>	2.8	A
Storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	150, -55 ~ 150	°C
Lead temperature	T <sub>L</sub>	260	°C

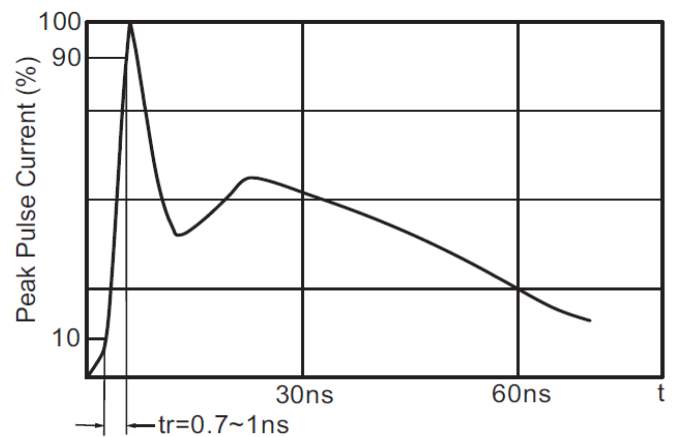
**ELECTRICAL CHARACTERISTICS** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Reveres maximum working voltage	$V_{RWM}$		-	-	5	V
Reveres leakage current	$I_R$	$V_{RWM}=5\text{V}$	-	-	1	$\mu\text{A}$
Reveres breakdown voltage	$V_{BR}$	$I_T=1\text{mA}$	6.5	-	-	V
Forward voltage	$V_F$	$I_F=10\text{mA}$	0.4	-	1.4	V
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	-	-	10	V
		$I_{PP}=2.8\text{A}, t_p=8/20\mu\text{s}$	-	-	13	V
Junction capacitance	I/O-GND	$f=1\text{MHz}, V_R=0$	-	0.7	1	$\text{pF}$
	I/O-I/O		-	0.35	5	

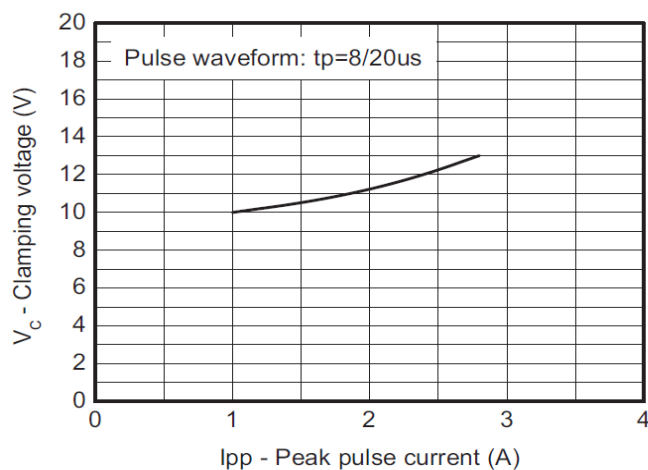
**RATINGS AND CHARACTERISTICS CURVES**



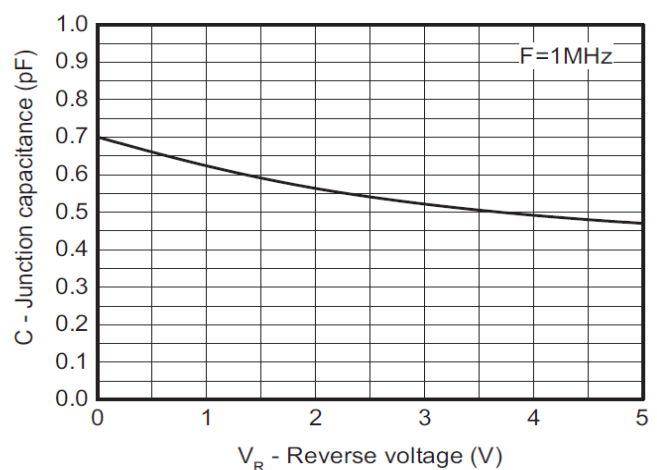
8/20us waveform



IEC61000-4-2 waveform

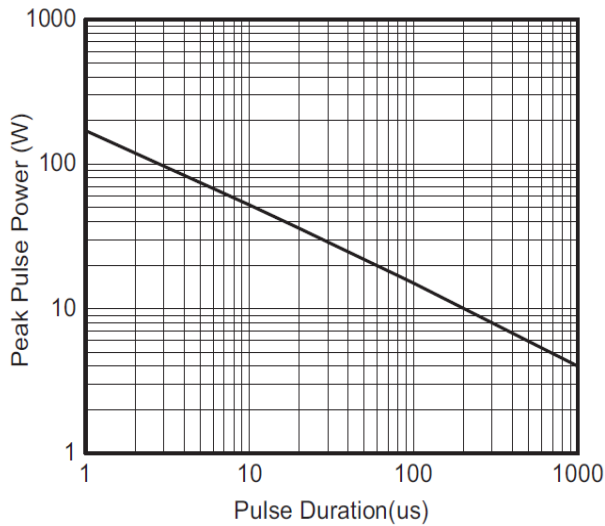


Clamping voltage vs. Peak pulse current

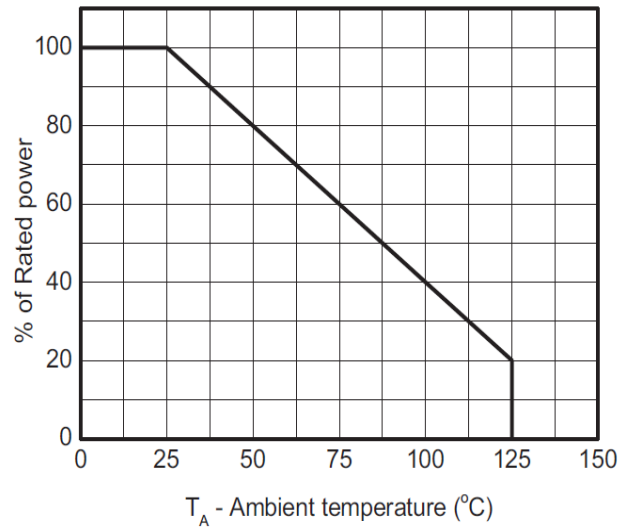


Capacitance vs. Reverses voltage

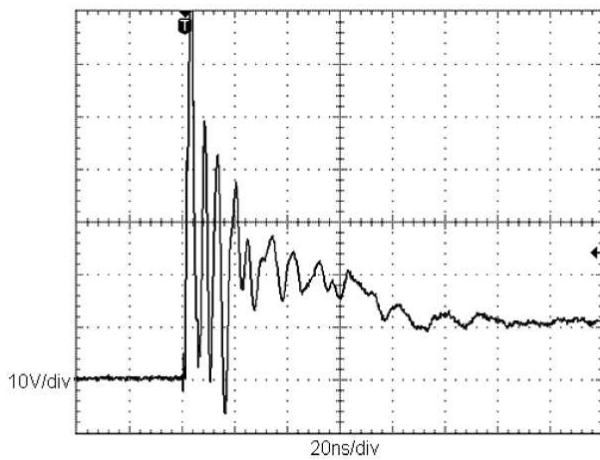
**RATINGS AND CHARACTERISTICS CURVES**



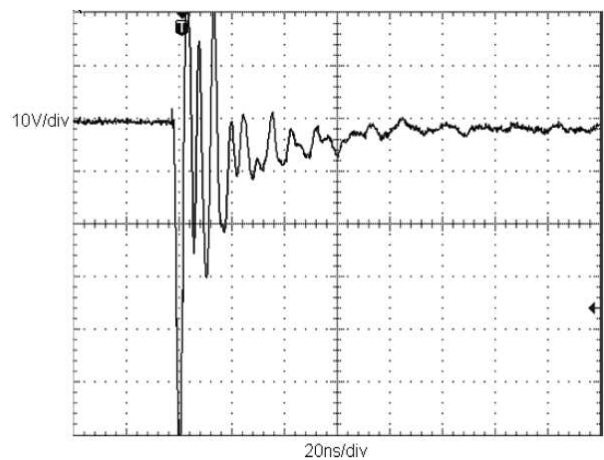
**Non-Repetitive Peak Pulse Power vs. Pulse time**



**Power derating vs. Temperature**



**ESD Clamping  
(IEC61000-4-2 +8KV contact)**



**ESD Clamping  
(IEC61000-4-2 -8KV contact)**