

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.

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

MARKING



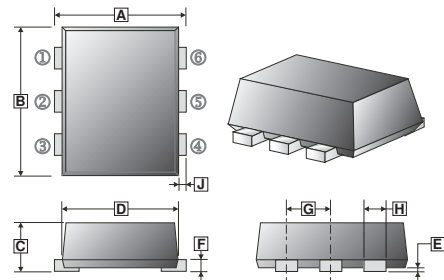
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-563	3K	7 inch

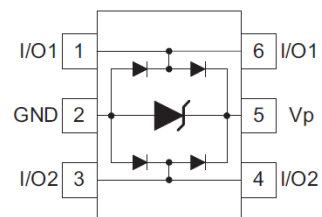
ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Rating		Symbol	Value	Unit
IEC 61000-4-2 (ESD)	Air contact		± 15	kV
	Contact discharge		± 8	
Peak pulse power ($t_p=8/20\mu\text{s}$)		P_{PK}	36	W
Peak pulse current ($t_p=8/20\mu\text{s}$)		I_{PP}	2.8	A
Storage temperature range		T_J, T_{STG}	150, -55 ~ 150	$^\circ\text{C}$
Lead temperature		T_L	260	$^\circ\text{C}$

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			

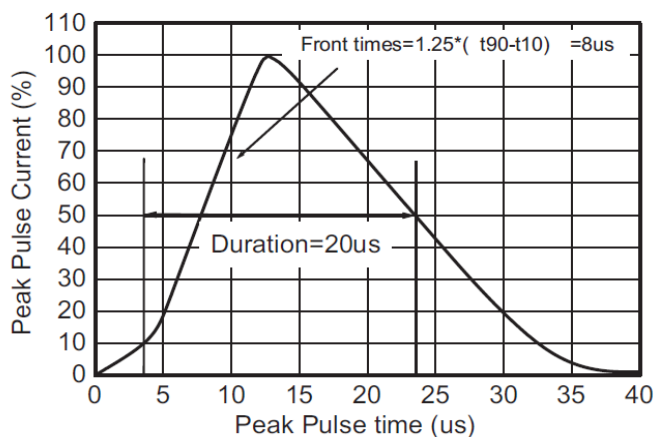


Pin configuration (Top-View)

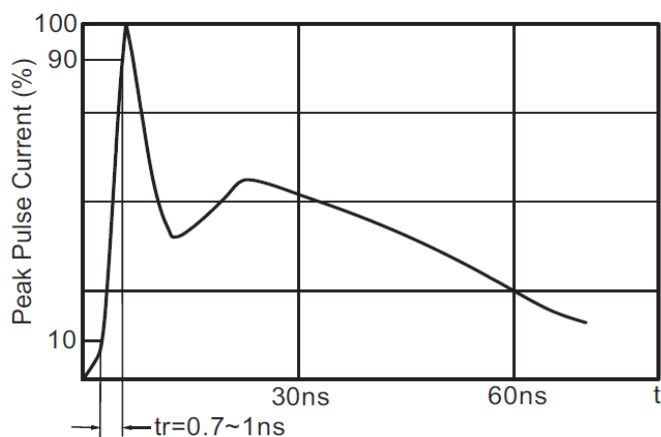
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

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	μA
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	C_J	$f=1\text{MHz}$, $V_R=0$	-	0.7	1	pF
	I/O-I/O			-	0.35	5	

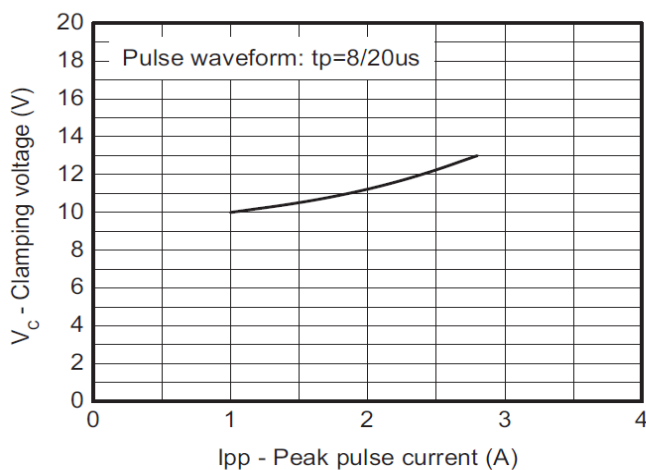
RATINGS AND CHARACTERISTICS CURVES



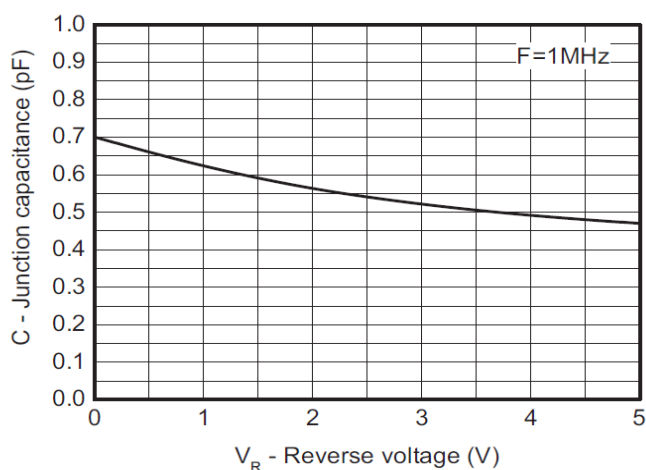
8/20us waveform



IEC61000-4-2 waveform

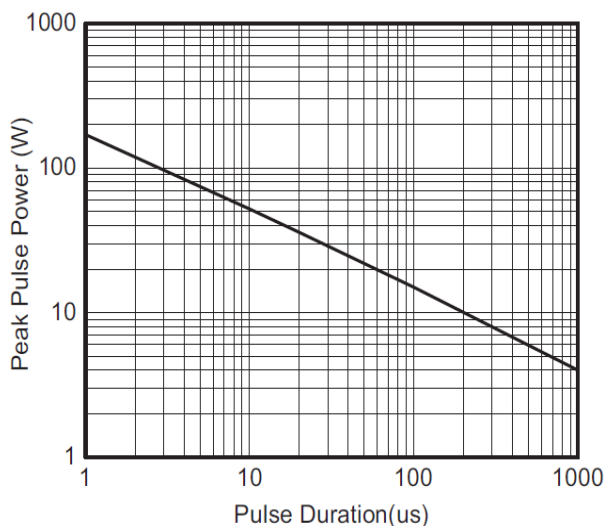


Clamping voltage vs. Peak pulse current

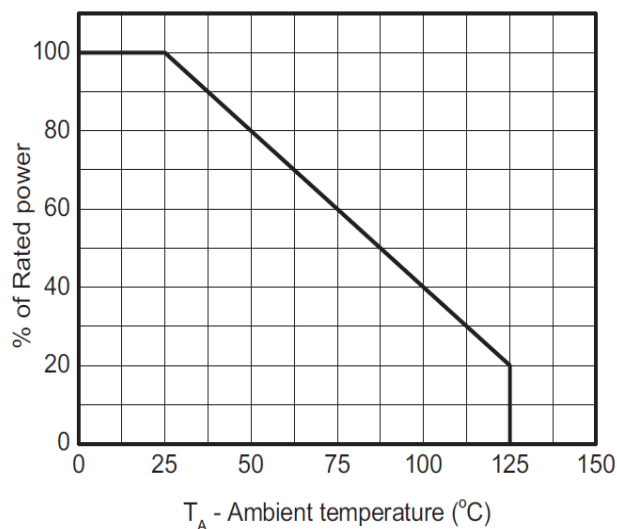


Capacitance vs. Reverses voltage

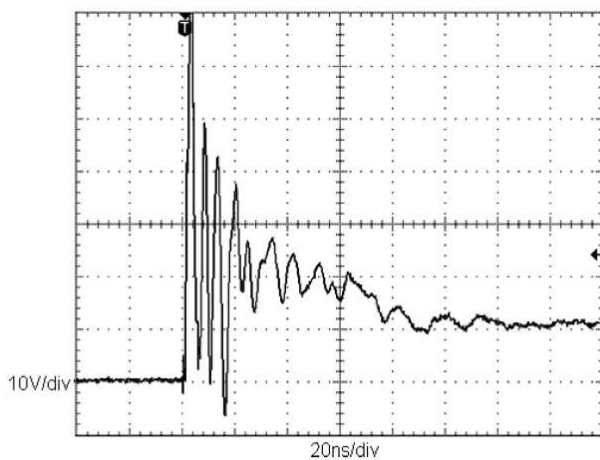
RATINGS AND CHARACTERISTICS CURVES



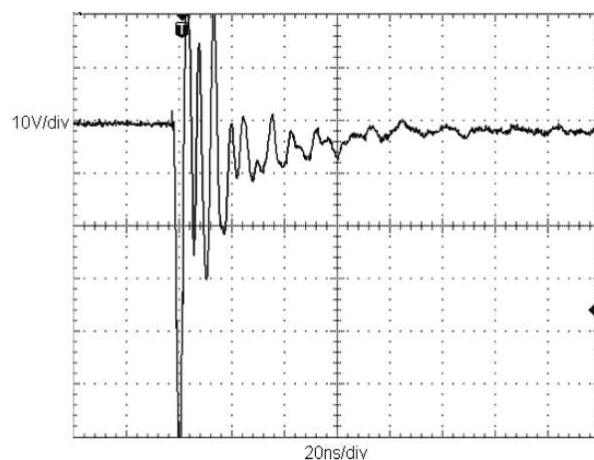
Non-Repetitive Peak Pulse Power vs. Pulse time



Power derating vs. Temperature



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



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