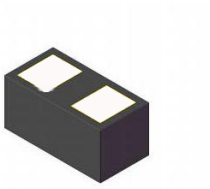
Desicription

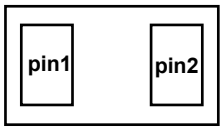
◆ This low-power TVS （Transient Voltage Suppressor)is mainly used for signal and power supply to protect the back-stage circuit from ESD(Electrostatic Discharge) and EFT(Electrical Fast Transients) and improve the reliability of the product, because its extremely small package is suitable for various portable devices and mobile electronic devices.

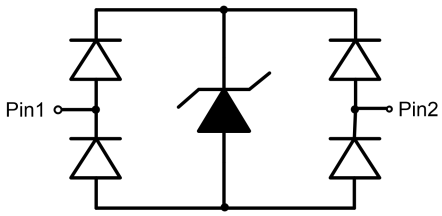


DFN0603-2L(SOD962)

Features

◆ IEC61000-4-2(ESD):±15KV Max Air
±15KV Max Contact
◆ IEC61000-4-4(EFT):40A(5/50ns)
◆ IEC61000-4-5(Surge):5A (8/20us)
◆ Line capacitance: 0.5pF(typical)@1MHz
◆ Very low reverse current:I_R< 0.2uA(typical)
◆ Halogen free ,Lead free and RoHs





Circuit Diagram

Application

◆ USB2.0 and USB3.0
◆ HDMI 1.3 and HDMI 1.4
◆ Cellular phones
◆ Portable devices
◆ Digital cameras
◆ Player
◆ Smart home
◆ Robot

Order information

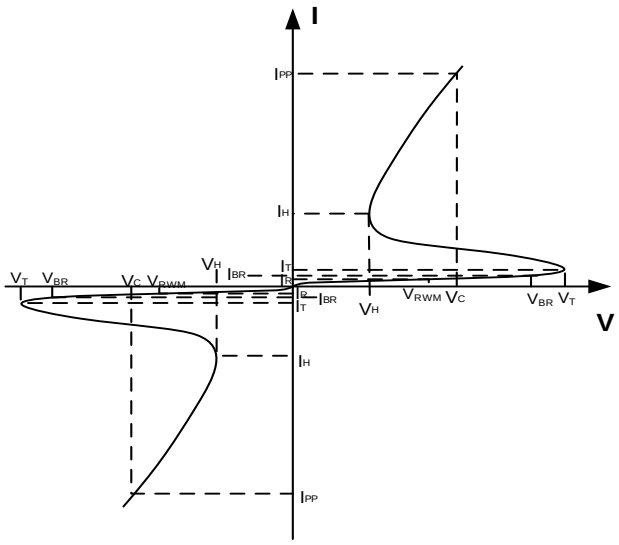
Model	Marking	Package	shipping
ESD18E005LA	UH	**DFN0603-2L**	**15000/Tape&Reel**

Electrical characteristic(T=25℃，unless otherwise specified)

Parameter	Symbol	Conditions	Min.	TYP.	Max.	Units
Reverse stand-off voltage	V_{RWM}				±18.0	V
Reverse leakage current	I_R	V_{RWM}=18V			0.2	uA
Reveres breakdown voltage	V_B	I_T=1mA	19.0	22.0		V
Reveres holding voltage	V_h	I_T=100mA	2.0	2.9		V
Dynamic resistance	R_{DYN}	TLP =0.2/100ns		0.28		Ω
Clamping voltage	V_C	I_{PP}=1A, t_p=8/20us		4.0		V
		I_{pp}= 5A, t_p=8/20us		6.0	8.0	V
Junction capacitance	C_J	V_R=0V, f=1MHz		0.5	0.7	pF
		V_R=0V, f=1GHz		0.3		pF

Electrical characteristic(T=25℃，unless otherwise specified)

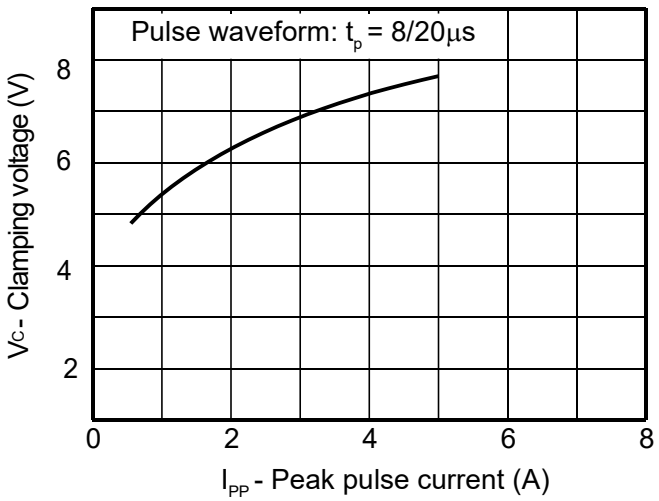
Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Reverse Stand-Off Voltage
I_{BR}	Reverse Stand-Off Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
Vc	Test Voltage
I_T	Test Current
V_H	Holding Voltage
I_H	Holding current



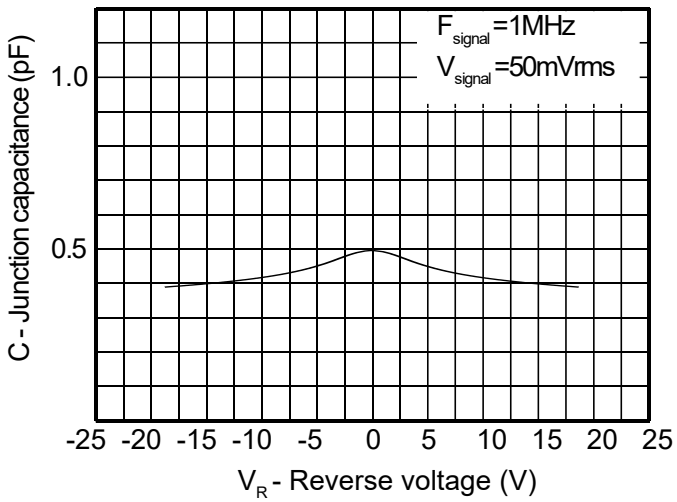
Maximum Rating

Rating	symbol	value	Units
Peak Pulse Current(tp=8/20us)	I_{pp}	5.0	A
ESD per IEC61000-4-2(Contact)	V_{ESD}	±15	KV
ESD per IEC61000-4-2(Air)		±15	
Operating Temperature	T_J	-55~125	℃
Storage Temperature	T_{STG}	-55~155	℃

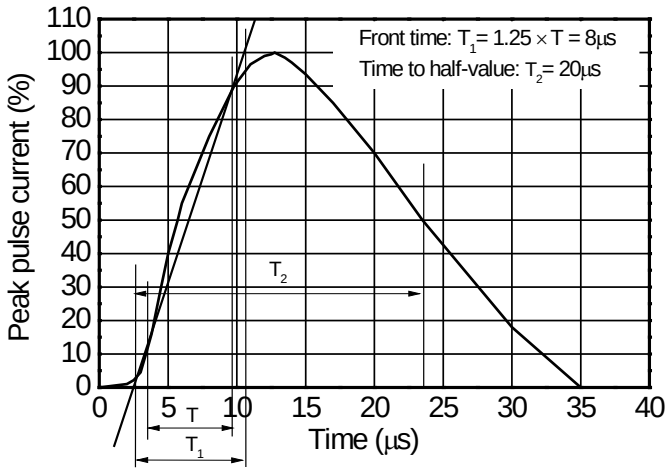
Typical characteristic



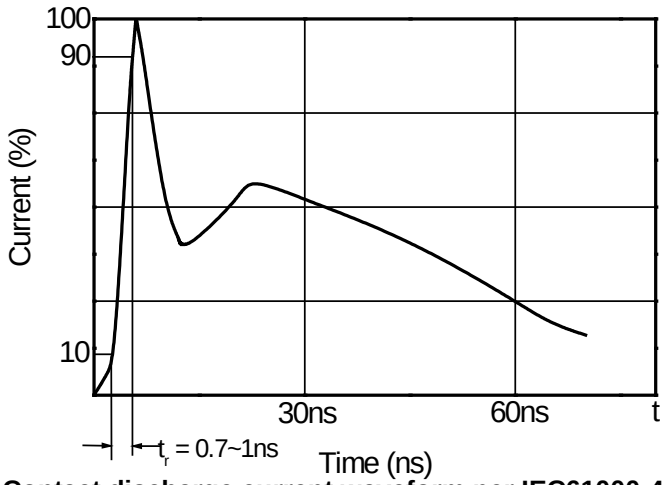
Clamping voltage vs. Peak pulse current



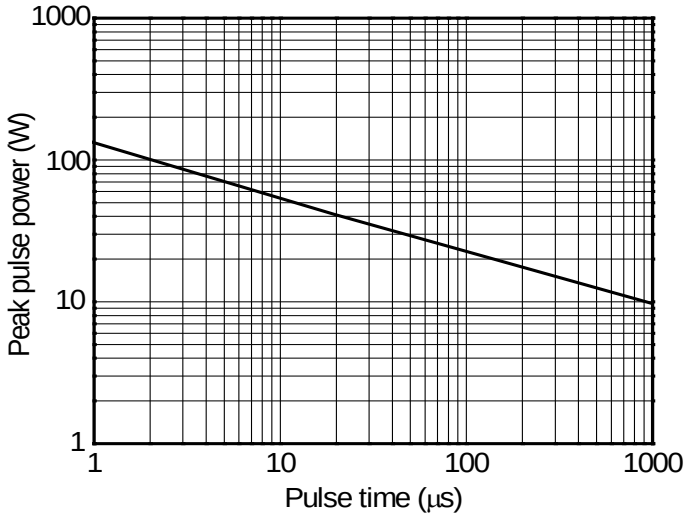
Capacitance vs. Reveres voltage



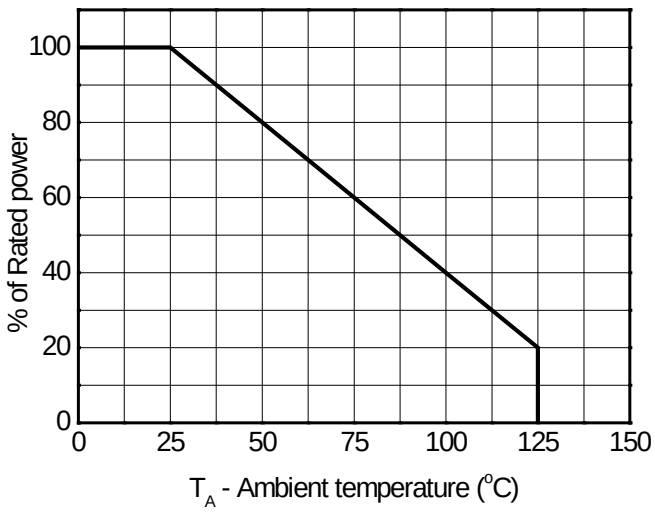
8/20μs waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2



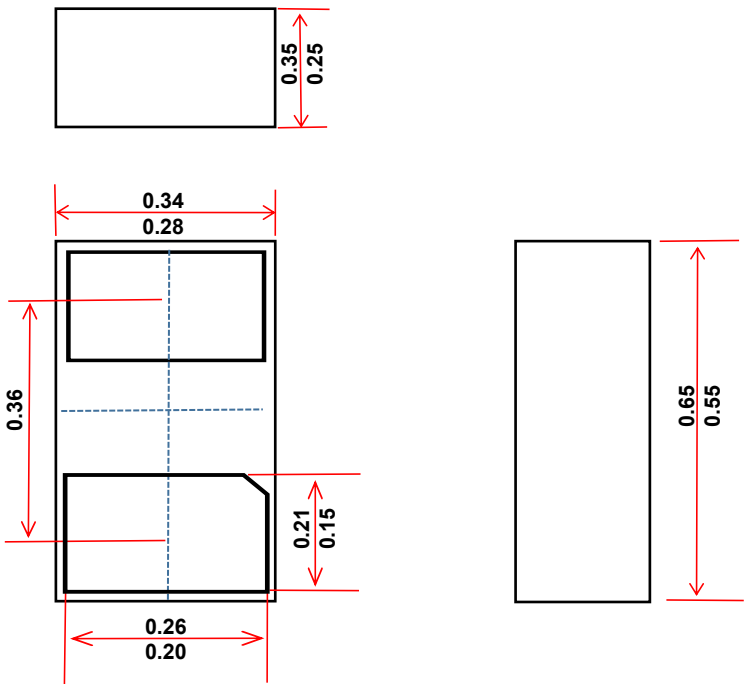
Non-repetitive peak pulse power vs. Pulse time



Power derating vs. Ambient temperature

Dimension outline Unit:mm

DFN0603-2L(SOD962)



Recommened Mounting Pad Layout Unit:mm

