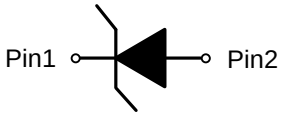
ESD9X7V

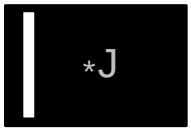
1-Line, Uni-directional, Normal capacitance Transient Voltage Suppressor

http//:www.sh-willsemi.com

FBP-02C



Pin configuration (Top view)



*** = Month (A~Z)**
J = Device code
Marking (Top View)

Descriptions

The ESD9X7V is a transient voltage suppressor (TVS) which provides 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 equipment applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

The ESD9X7V was past ESD transient voltage up to ±30kV (contact) according to IEC61000-4-2 and withstand peak current up to 9.5A for 8/20μs pulse according to IEC61000-4-5.

The ESD9X7V is available in FBP-02C package. Standard products are Pb-free and Halogen-free.

Features

- Working voltage : 7V
- Peak power (tp=8/20μs) : 161W
- ESD protection
  IEC61000-4-2 (Contact) : ±30kV
  IEC61000-4-2 (Air) : ±30kV
- Low leakage current
- Small package

Order information

Device	Package	Shipping
ESD9X7V-2/TR	FBP-02C	10000/Tape&Reel

Applications

- Mobile phone
- PAD
- Notebook
- STB
- LCD TV
- Digital camera
- Other electronic equipment

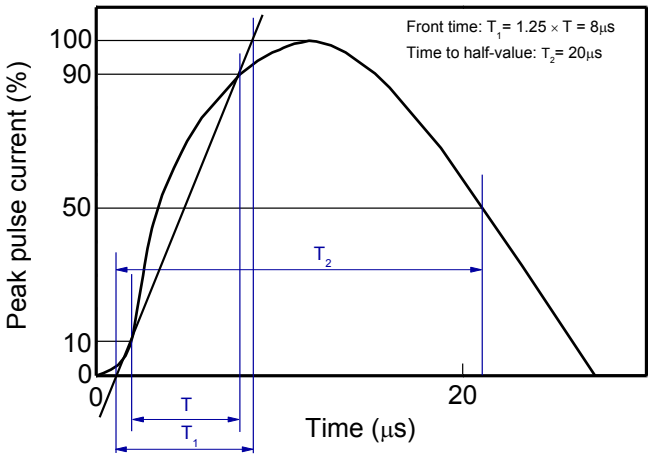
Absolute maximum ratings

Parameter	Symbol	Rating	Unit
Peak pulse power (t_p = 8/20μs)	Ppk	161	W
Peak pulse current (t_p = 8/20μs)	Ipp	9.5	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	kV
ESD according to IEC61000-4-2 contact discharge		±30	
Junction temperature	T_J	125	°C
Operating temperature	T_{OP}	-40~85	°C
Lead temperature	T_L	260	°C
Storage temperature	T_{STG}	-55~150	°C

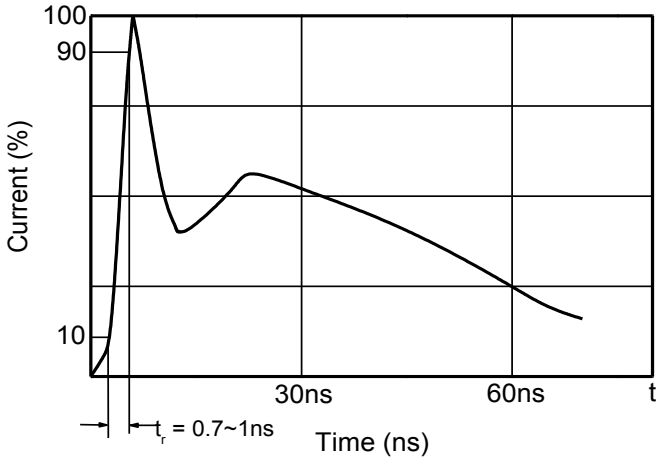
Electronics characteristics (Ta=25°C, unless otherwise noted)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V_{RWM}				7	V
Reverse leakage current	I_R	V_{RWM}=7V			0.05	μA
Reverse breakdown voltage	V_{BR}	I_T=1mA	7.5	8.0	8.8	V
Forward voltage	V_F	I_F=10mA	0.55	0.9	1.25	V
Clamping voltage	V_C	Ipp=1A, tp=8/20μs			10	V
		Ipp=9.5A, tp=8/20μs			17	V
Junction capacitance	C_J	f=1MHz, V_R=0V		49	65	pF

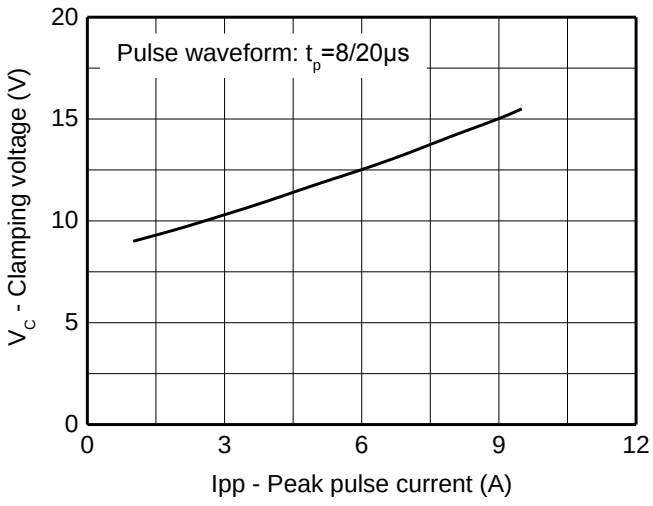
Typical characteristics (Ta=25°C, unless otherwise noted)



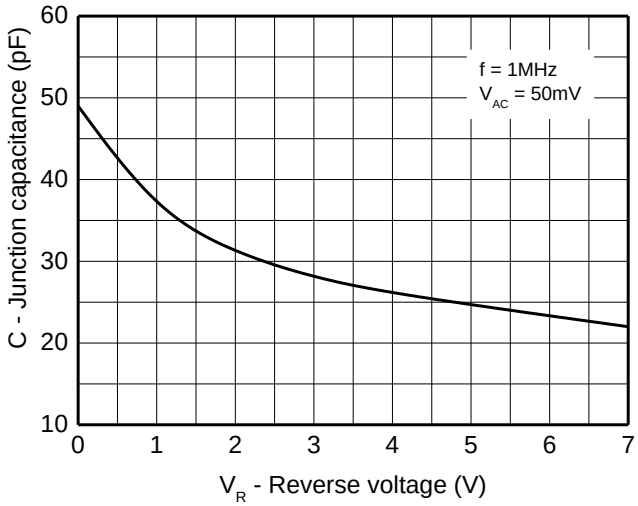
8/20μs waveform per IEC61000-4-5



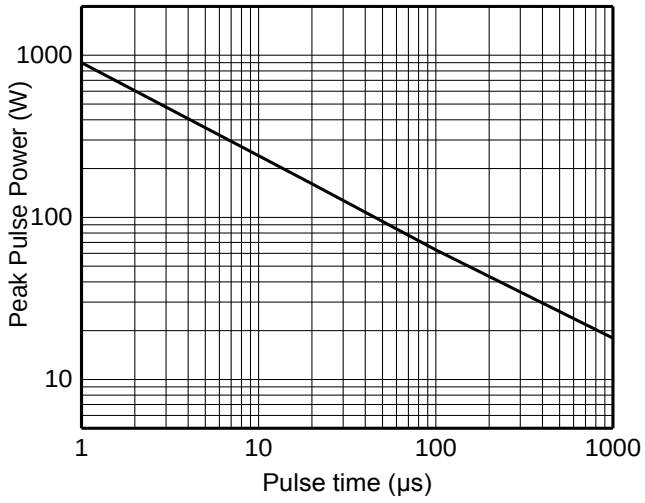
Contact discharge current waveform per IEC61000-4-2



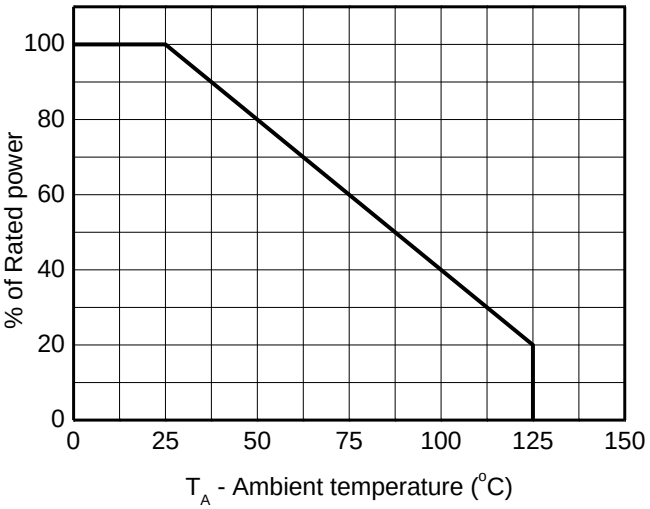
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage

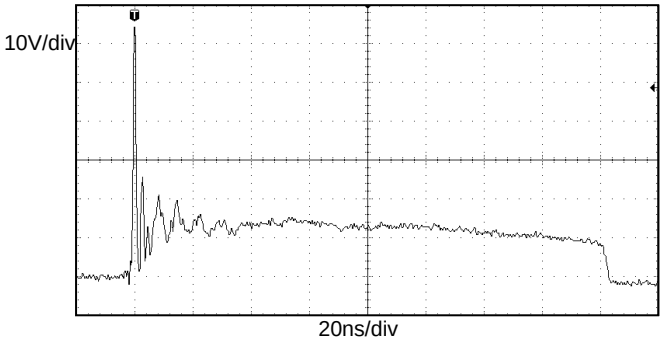


Non-repetitive peak pulse power vs. Pulse time

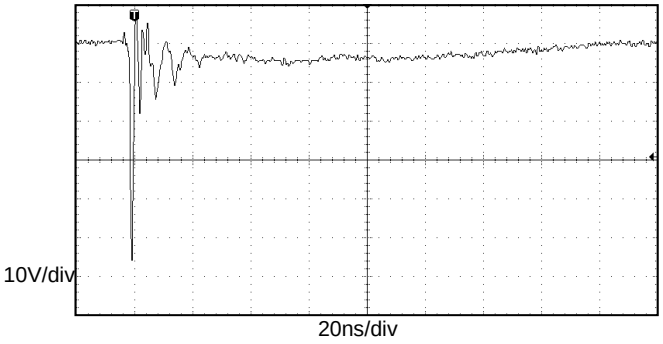


Power derating vs. Ambient temperature

Typical characteristics (Ta=25°C, unless otherwise noted)



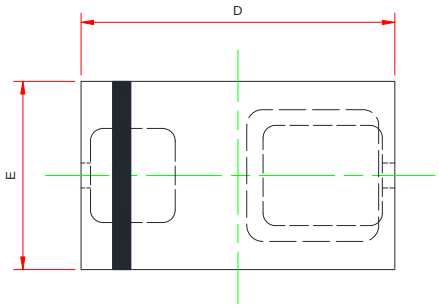
ESD Clamping
(+8kV contact discharge per IEC61000-4-2)



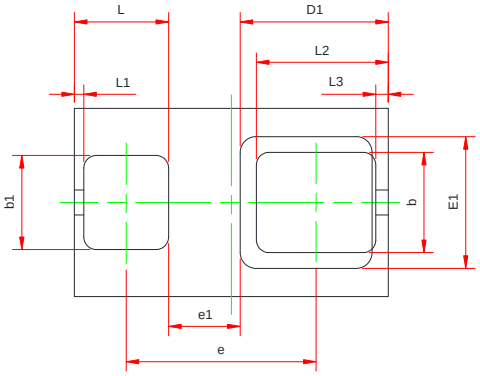
ESD Clamping
(-8kV contact discharge per IEC61000-4-2)

Package outline dimensions

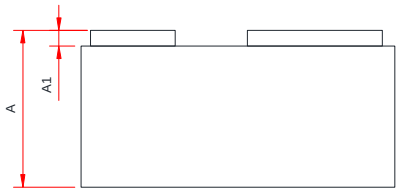
FBP-02C



Top View



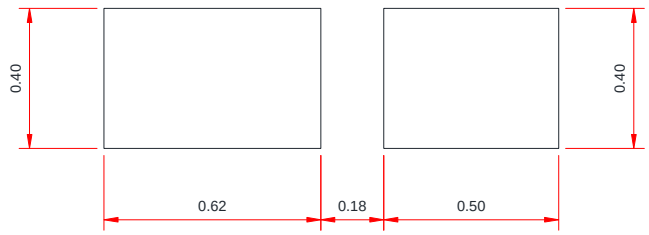
Bottom View



Side View

Symbol	Dimensions In Millimeters		
	Min.	Typ.	Max.
A	0.450	0.500	0.550
A1	0.010	--	0.100
D	0.950	1.000	1.050
E	0.550	0.600	0.650
D1	0.470 Ref.		
E1	0.420 Ref.		
b	0.270	0.320	0.370
b1	0.250	0.300	0.350
e	0.555	0.605	0.655
e1	0.230 Ref.		
L	0.250	0.300	0.350
L1	0.030 Ref.		
L2	0.370	0.420	0.470
L3	0.040 Ref.		

Recommend land pattern (Unit: mm)



Notes:

This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.

单击下面可查看定价，库存，交付和生命周期等信息

>>Willsemi(韦尔半导体)