WPD0802C

High Property Device for Surge & ESD Protection

The WPD0802C is designed for applications requiring Surge & ESD protection capability. They are intended for use in surge and ESD sensitive equipment such as Telecom equipments, DVR

The WPD0802C has been specifically designed to protect sensitive ICs which are connected to data and transmission lines from overvoltage caused by surge and ESD(electrostatic discharge).

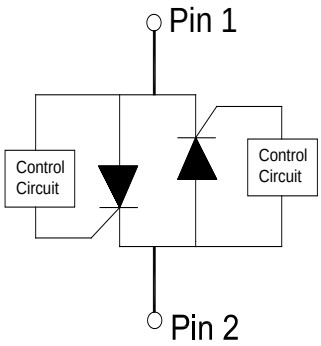
Features

- High Power Capacity – 6000V (10/700us voltage Waveform)
- Bi-direction Protection Devices
- Protects One Port
- Low Protection Voltage
- Low Leakage
- Response Time is < 1us
- Solid-state silicon technology
- Meets MSL 1 Requirements
- ROHS compliant
- WeiPan technology

SMB

Main applications

- Audio/Video Line
- RS-485
- Peripherals
- Networking and Telecom
- Serial and Parallel Ports



Protection solution to meet

- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC61000-4-5 (surge) ±6000V(10/700us)

Ordering Information

Device	Qty per Reel	Reel Size
WPD0802C	2500	13 Inch

Maximum ratings (Tamb=25℃ Unless Otherwise Specified)			
Parameter	**Symbol**	**Value**	**Unit**
Peak Voltage Pulse (tp=10/700μs waveform)		6000	V
ESD Rating per IEC61000-4-2： Contact Air		10 15	KV
Lead Soldering Temperature	T_L	260 (10 sec.)	℃
Operating Temperature Range	T_J	-55 ~ 150	℃
Storage Temperature Range	T_{STG}	-55 ~ 150	℃
Lead Solder Temperature − Maximum (10 Second Duration)	T_L	260	℃

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied,damage may occur and reliability may be affected.

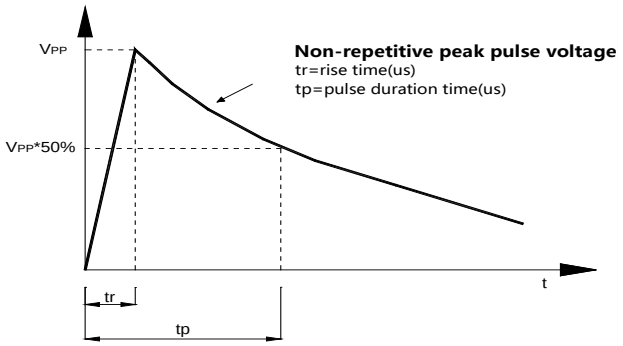
**Other voltages may be available upon request.*

1. Nonrepetitive current pulse, per Figure 1.

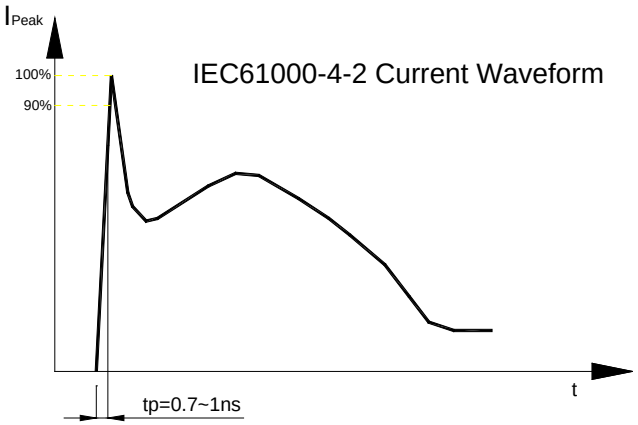
Electrical characteristics (Tamb=25℃ Unless Otherwise Specified)						
Symbol	**Parameter**	**Conditions**	**Min.**	**Typ.**	**Max.**	**Units**
V_{RWM}	Reverse Working Voltage				6.0	V
V_{BR}	Reverse Breakdown Voltage	IT = 1mA,	6.0		15	V
I_R	Reverse Leakage Current	V_{RWM} = 6V,			1	μA
I_H	Hold Current			50		mA
V_S	Absorbed Voltage	@100V/s			25	V
		@500V/us			50	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz,		150	200	pF
		V_R = 1V, f = 1MHz,		80	150	pF

Junction capacitance is measured in VR=0V,F=1MHz

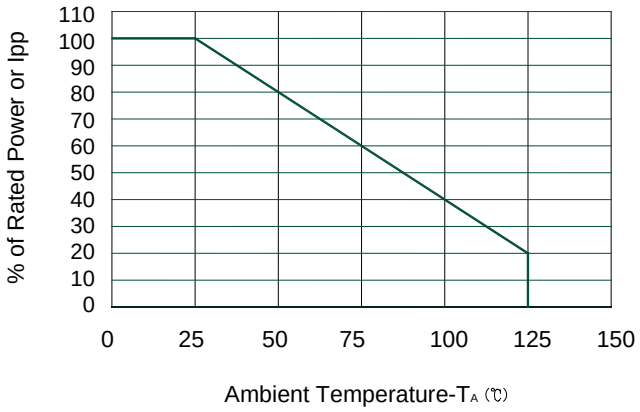
Typical electrical characterist applications



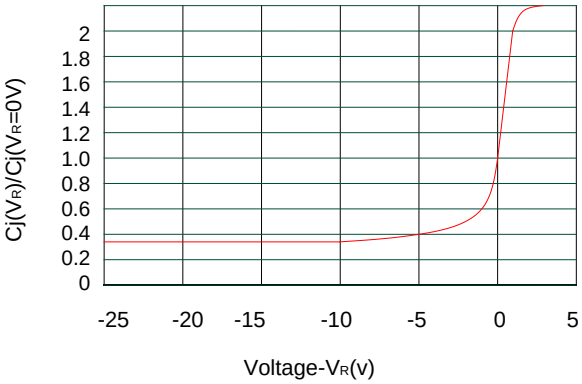
Pulse Waveform



ESD Discharge IEC61000-4-2 Current Waveform

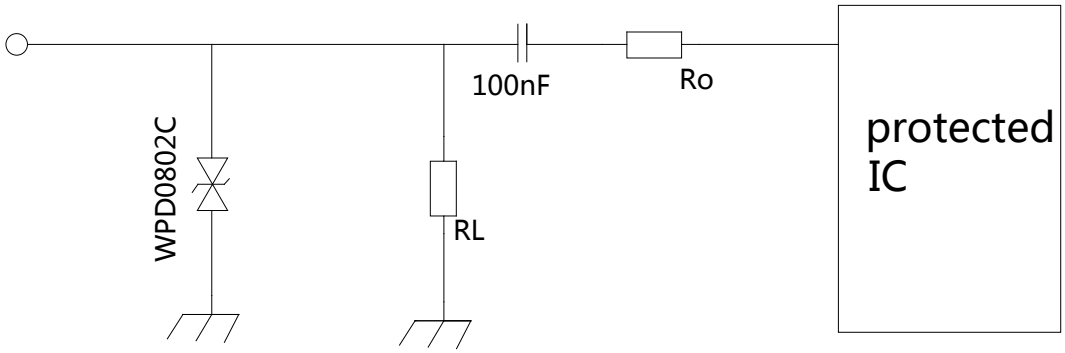


Power Derating Curve



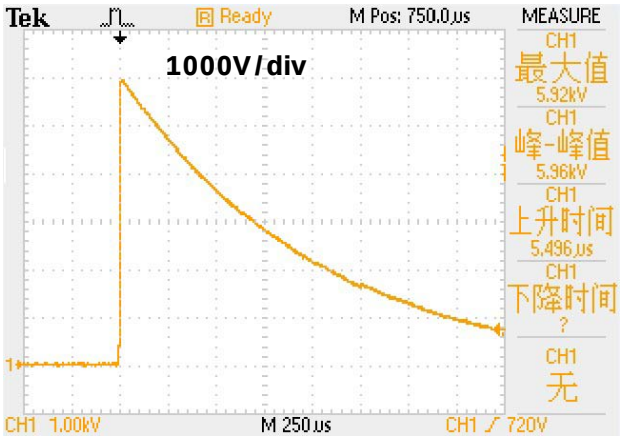
Junction Capacitance vs. Reverse Voltage

Typical applications

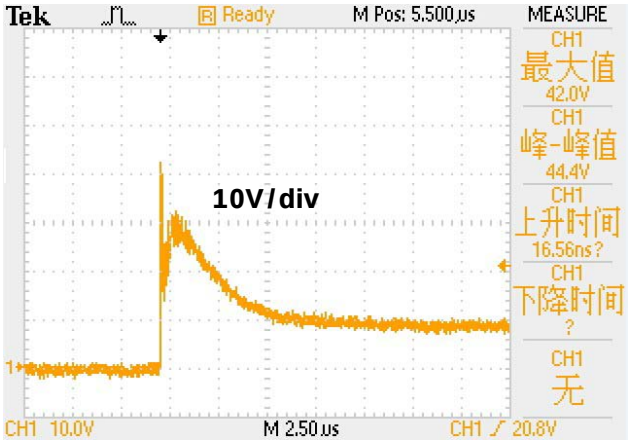


WPD0802C在视频口过压
保护电路的典型应用

Video Line Protection for Surge & ESD in DVR



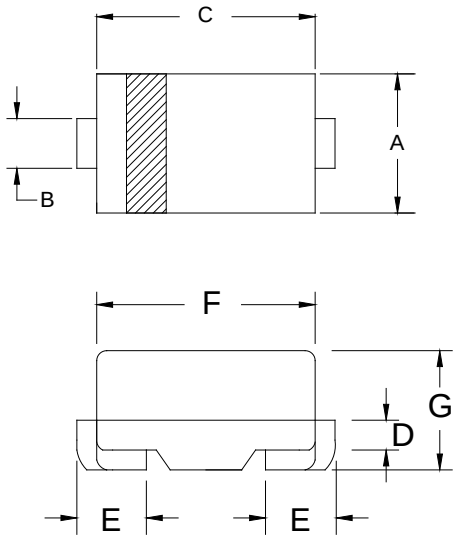
10/700uS,6000V Surge waveform



WPD0802C Absorbed surge waveform

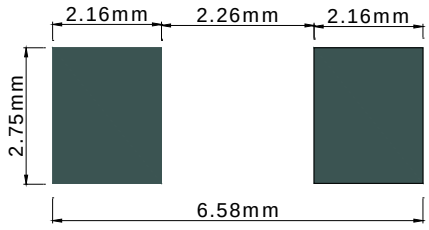
Package information

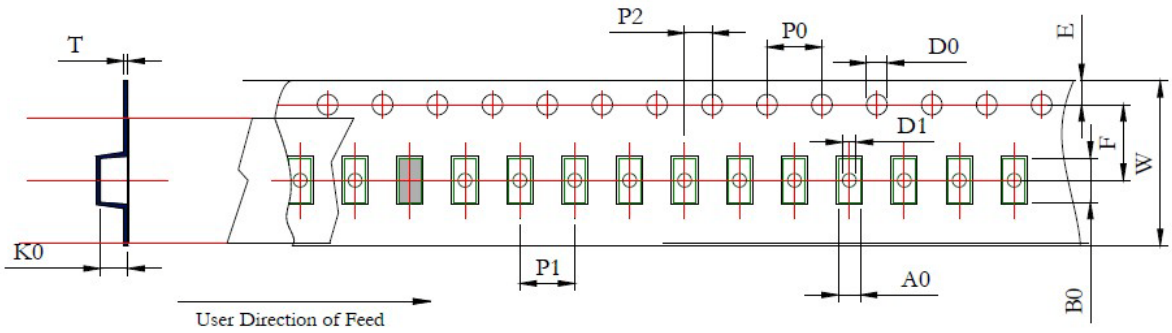
SMB



Ref	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	3.30	3.80	0.130	0.150
B	1.95	2.12	0.077	0.083
C	4.24	4.75	0.167	0.187
D	0.15	0.40	0.006	0.016
E	0.76	1.27	0.030	0.050
F	5.00	6.00	0.197	0.236
G	2.00	2.60	0.079	0.102

Recommended Pad outline





Reel Dim.	Tape	A0	B0	K0	D0	E	F	W	P0	P1	P2	T
330(13")	12.0	3.7±0.10	5.6±0.10	3.0±0.10	Ø1.5±0.10	1.75±0.10	5.5±0.10	12.0±0.30	4.0±0.10	8.0±0.10	2.0±0.10	0.50±0.05

Dimension is in mm.