CYG WAYON
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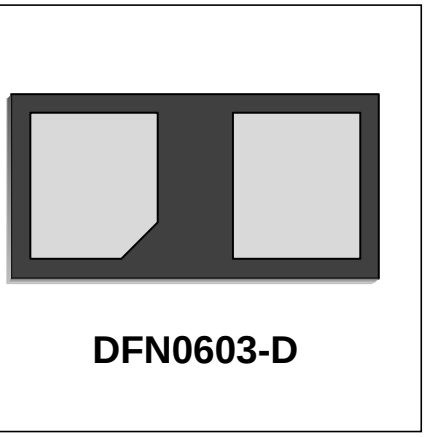
WE12DS-B

Order Code: WE12DS-B

Transient Voltage Suppressor

Features



DFN0603-D

- Small Body Outline Dimensions: 0.60 mm x 0.30 mm
- 150 Watts Peak Pulse Power per Line (t_p=8/20μs)
- Bidirectional ESD Protection of one line
- Low Clamping Voltage
- Working Voltage: 12 V
- Low Leakage Current

IEC COMPATIBILITY (EN61000-4)

- **IEC 61000-4-2 (ESD) ±30kV (air), ±30kV (contact)**
- **IEC 61000-4-4 (EFT) 40A (5/50ns)**
- **IEC 61000-4-5 (Lightning) 5.5A (8/20μs)**

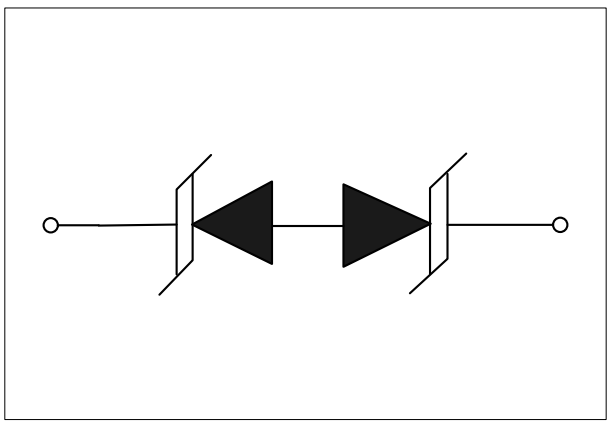
Mechanical Characteristics

- DFN0603-D package
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel per EIA 481
- RoHS Compliant

Applications

- Cellular handsets and accessories
- Portable electronics
- Communication systems
- Computers and peripherals

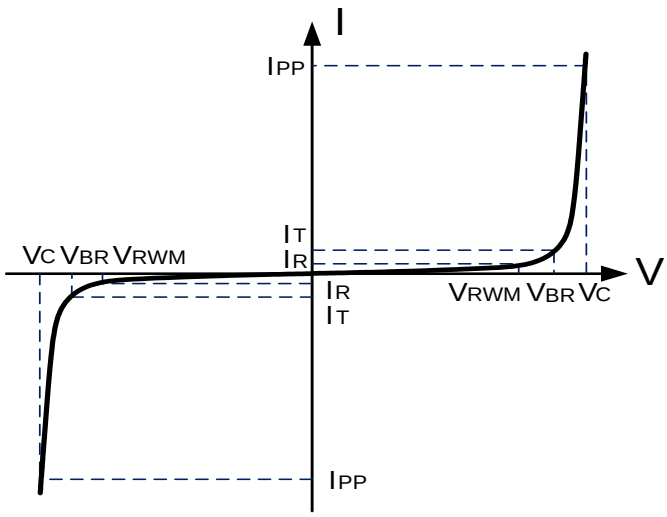
Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	**Symbol**	**Value**	**Units**
Peak Pulse Power（t_p =8/20μs）	P_{PP}	150	W
Peak Pulse Current (t_p = 8/20μs)	I_{pp}	5.5	A
Operating Temperature	T_J	-55 to + 150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25℃)

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Electrical Characteristics

WE12DS-B						
Parameter	**Symbol**	**Conditions**	**Minimum**	**Typical**	**Maximum**	**Units**
Reverse Stand-Off Voltage	V_{RWM}				12	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	13.4			V
Reverse Leakage Current	I_R	V_{RWM}=12V, T=25°C			200	nA
Clamping Voltage	V_C	I_{PP}=1A, t_p=8/20μs		17	20	V
Clamping Voltage	V_C	I_{PP}=5.5A, t_p=8/20μs		23	26	V
Junction Capacitance	C_j	V_R = 0V, f= 1MHz		3.5	5	pF

Note: 1. ESD Pulse Waveform according to IEC 61000-4-2. see Table1 and Figure4.

2. ESD tests Setup see Figure 5.

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

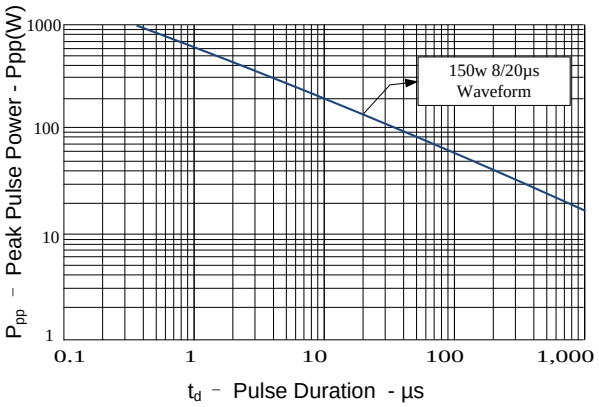


Figure 2: Power Derating Curve

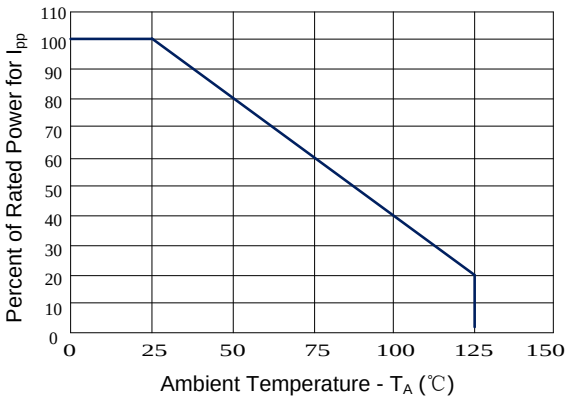


Figure 3: Normalized Junction Capacitance vs. Reverse Voltage

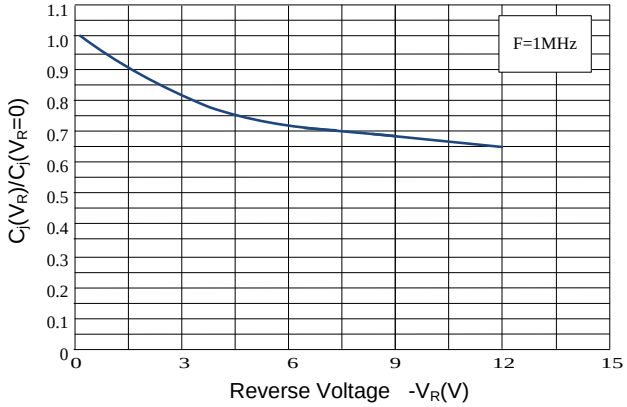
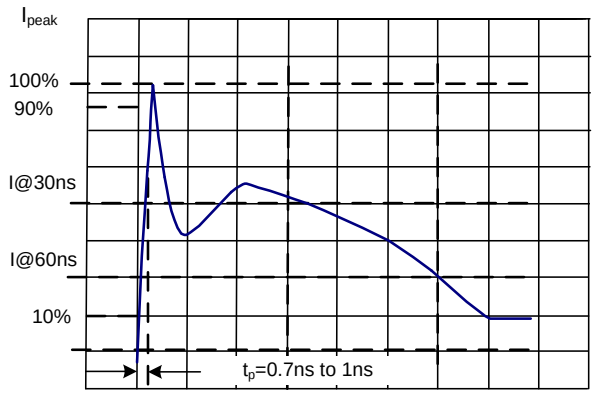


Table 1. IEC 61000-4-2 Discharge Parameters

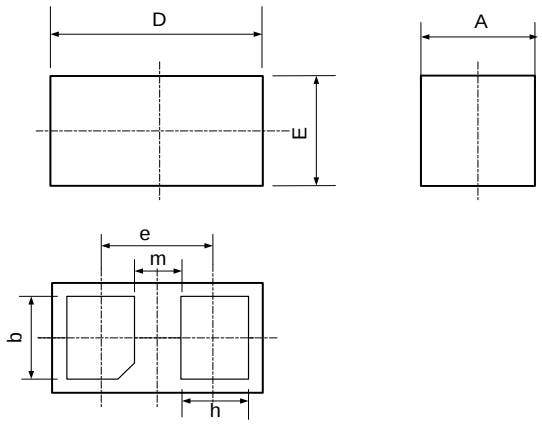
Level	First Peak Current (A)	Peak Current at 30 ns (A)	Peak Current at 60 ns (A)	Test Voltage (Contact Discharge) (kV)	Test Voltage (Air Discharge) (kV)
1	7.5	4	2	2	2
2	15	8	4	4	4
3	22.5	12	6	6	8
4	30	16	8	8	15

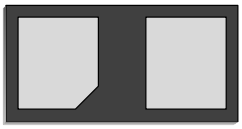
Figure 4：IEC 61000-4-2 Waveform



Outline Drawing –DFN0603-D

PACKAGE OUTLINE

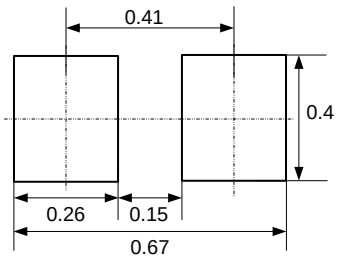




DFN0603-D

SYMBOL	MILIMETER	
	MIN	MAX
A	0.28	0.32
D	0.55	0.65
E	0.25	0.35
b	0.20	0.30
e	0.350	
m	0.165	
h	0.14	0.24

Land Pattern



Marking Codes

Part Number	Marking Code
WE12DS-B	 F = Specific Device Code M = Month Code

Package Information

Qty：15k/Reel

CONTACT INFORMATION

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