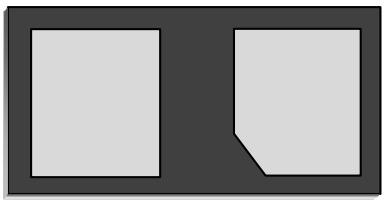
WE2.5DMS-B

Transient Voltage Suppressor

Features

- 72 Watts Peak Pulse Power per Line (t_p = 8/20μs)
- Protects one I/O or power line
- Low Clamping Voltage
- Working Voltage: 2.5V
- Low Leakage Current



DFN0603-2L

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)8A (8/20μs)**

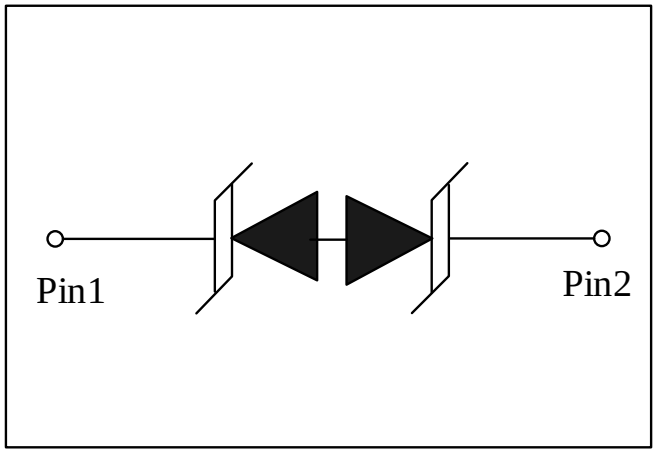
Mechanical Characteristics

- DFN0603-2L package
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

Applications

- RoHS Compliant
- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants (PDAs)

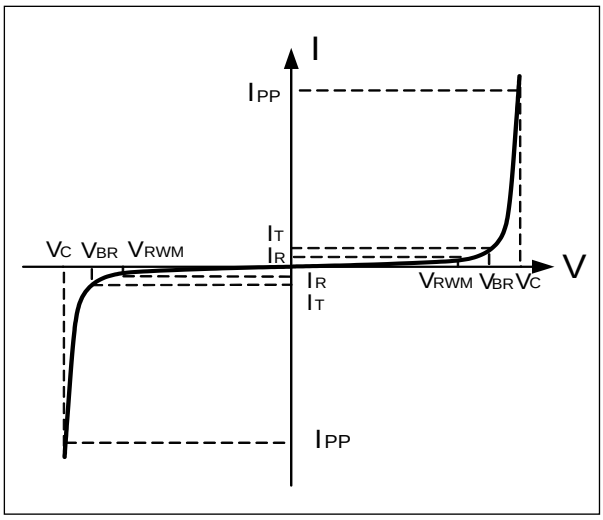
Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	**Symbol**	**Value**	**Units**
Peak Pulse Power（t_p =8/20μs）	P_{PP}	72	Watts
Peak Pulse Current（t_p =8/20μs）	I_{PP}	8	A
Operating Temperature	T_J	-55 to + 125	°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}	Reverse Stand-Off Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Electrical Characteristics

WE2.5DMS-B						
Parameter	**Symbol**	**Conditions**	**Minimum**	**Typical**	**Maximum**	**Units**
Reverse Stand-Off Voltage	V_{RWM}				2.5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	3			V
Reverse Leakage Current	I_R	V_{RWM}=2.5V,T=25°C			500	nA
Clamping Voltage	V_C	I_{PP}=8A, t_p=8/20μs		7	9	V
Dynamic Resistance[1,2]	R_{DYN}	TLP=0.2/100ns		0.25		Ω
ESD Clamping Voltage[1]	V_C	I_{PP} = 4A t_p = 0.2/100ns		5.6		V
ESD Clamping Voltage[1]	V_C	I_{PP} = 16A t_p = 0.2/100ns		8.6		V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz		15	25	pF

Note：1、TLP Setting：t_p=100ns, t_r=0.2ns, I_{TLP} and V_{TLP} sample window:t_1=70ns to t_2=90ns.

2、Dynamic resistance calculated from I_{PP}=4A to I_{PP}=16A using “Best Fit”

Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

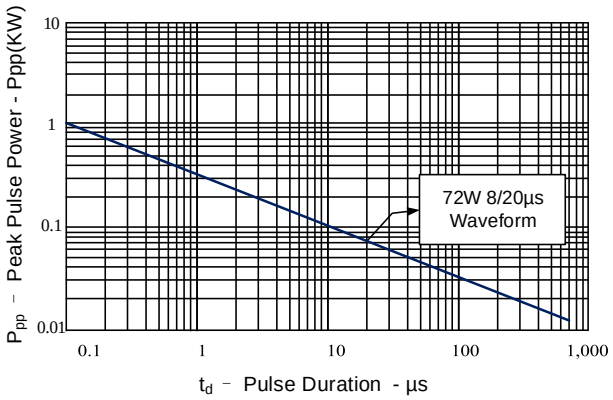


Figure 2: Power Derating Curve

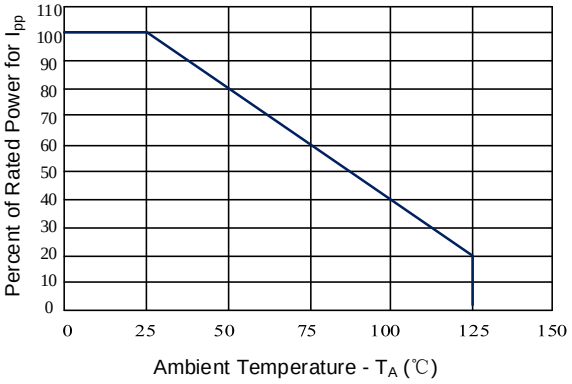


Figure 3: Clamping Voltage vs. Peak Pulse Current

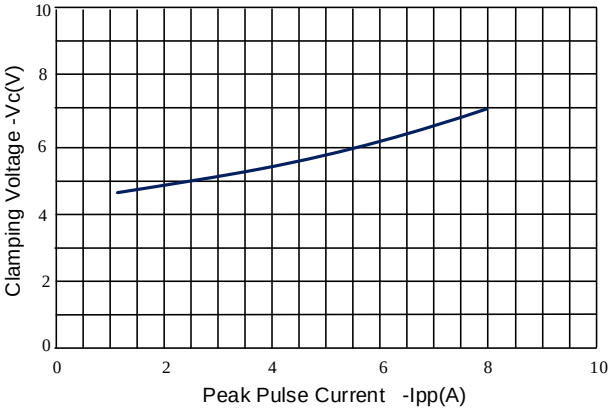


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

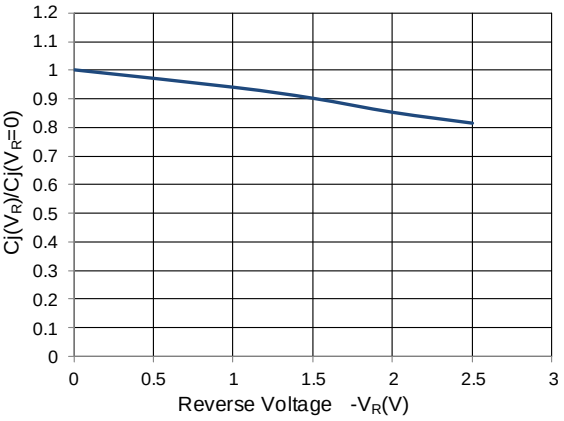


Figure 5: TLP Positive I-V Curve

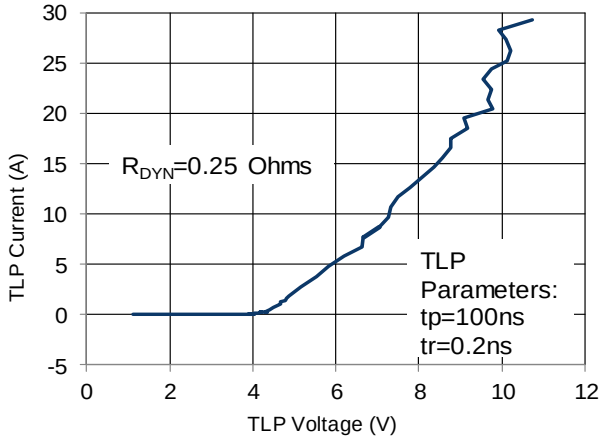
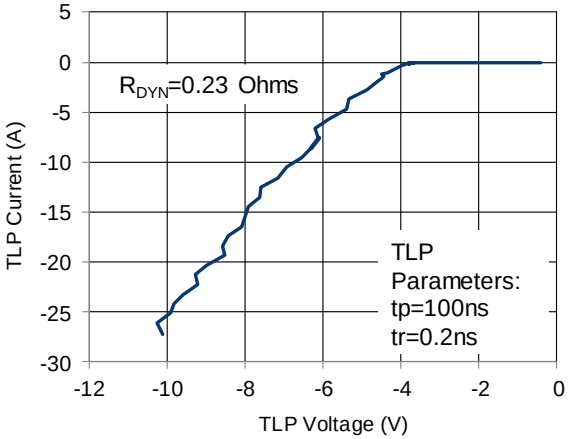
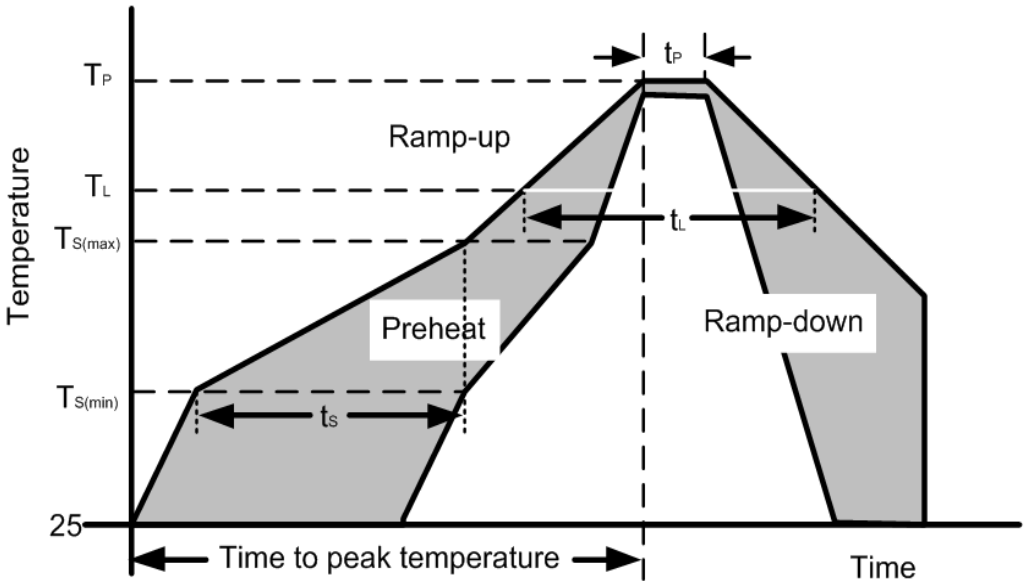


Figure 6: TLP Negative I-V Curve



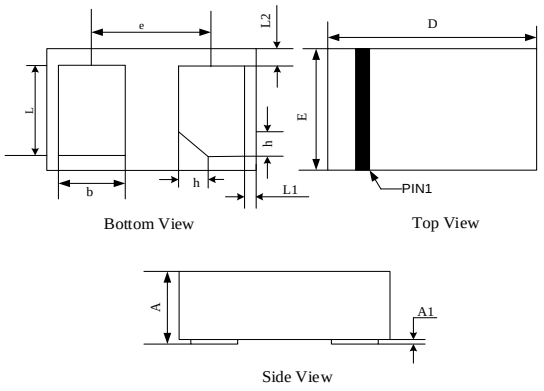
Soldering Parameters

Reflow Condition		Pb – Free assembly
Pre Heat	Temperature Min ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (ts)	60 – 190 secs
Average ramp up rate (Liquidus Temp) (T_L) to peak		5°C/second max
$T_{S(max)}$ to T_L——Ramp-up Rate		5°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260+0/-5 °C
Time within actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		5°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes Max.
Do not exceed		280°C



Outline Drawing –DFN0603-2L

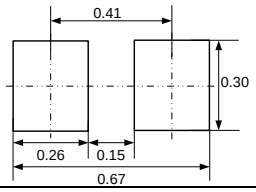
PACKAGE OUTLINE



DFN0603-2L

SYMBOL	MILIMETER			Dimension In Inches		
	NOM	MIN	MAX	NOM	MIN	MAX
A	--	0.280	0.320	--	0.011	0.013
A1	--	--	0.050	--	--	0.002
D	0.610	0.570	0.630	0.024	0.022	0.025
E	0.310	0.270	0.330	0.012	0.011	0.013
b	0.180	0.155	0.205	0.007	0.006	0.008
L	0.240	0.200	0.260	0.009	0.008	0.010
h	--	0.050	0.100	--	0.002	0.004
L1	0.035REF			0.001REF		
L2	0.035REF			0.001REF		
e	0.360BSC			0.014BSC		

Land Pattern



Marking Codes

Part Number	WE2.5DMS-B
Marking Code	1 B≧ 2 B = Specific Device Code M = Month Code

Package Information

Qty：15k/Reel

CONTACT INFORMATION

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WAYON website: **http://www.way-on.com**

For additional information, please contact your local Sales Representative.

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Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.