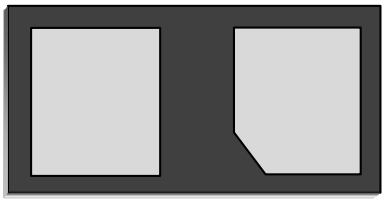
WE05DLCMS-B

Transient Voltage Suppressor

Features

- Small Body Outline Dimensions
- Bidirectional ESD Protection of one line
- Low Clamping Voltage
- Low Capacitance:3.0 pF
- Working Voltage: 5 V
- Low Leakage Current



DFN0603-2L

IEC COMPATIBILITY (EN61000-4)

- **IEC 61000-4-2 (ESD) ±22kV (air), ±20kV (contact)**
- **IEC 61000-4-4 (EFT) 40A (5/50ns)**

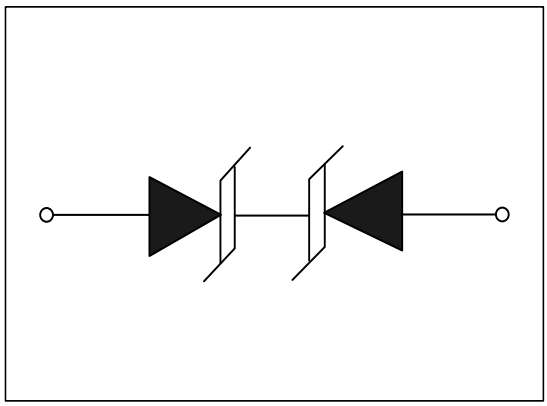
Mechanical Characteristics

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

Applications

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

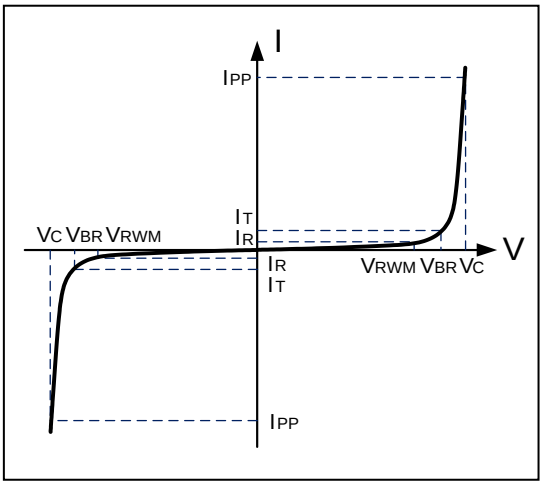
Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	**Symbol**	**Value**	**Units**
Peak Pulse Power（t_p =8/20μs）	P_{PP}	26	W
Peak Pulse Current（t_p =8/20μs）	I_{PP}	2	A
Operating Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters

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(T=25℃ unless otherwise noted)

WE05DLCMS-B						
Parameter	**Symbol**	**Conditions**	**Minimum**	**Typical**	**Maximum**	**Units**
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6		9	V
Reverse Leakage Current	I_R	V_{RWM}=5V			100	nA
Clamping Voltage	V_C	I_{PP}=2A, t_p=8/20μs		11	13	V
ESD Clamping Voltage[1]	V_C	I_{PP} = 4A t_p = 0.2/100ns		9.7		V
ESD Clamping Voltage[1]	V_C	I_{PP} = 16A t_p = 0.2/100ns		15.5		V
Dynamic Resistance[1,2]	R_{DYN}	TLP=0.2/100ns		0.48		Ω
Junction Capacitance	C_j	V_R = 0V, f= 1MHz		3	3.5	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

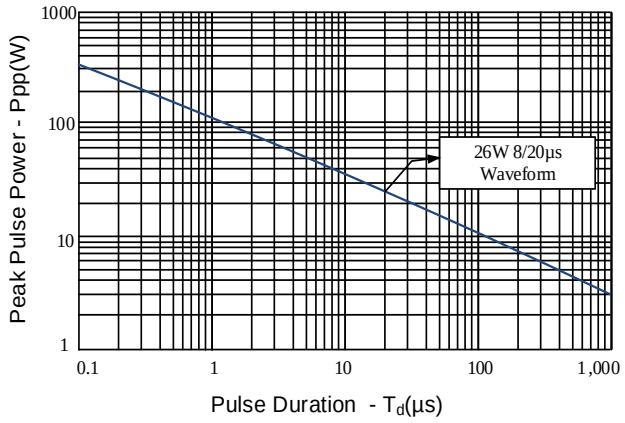


Figure 2: Power Derating Curve

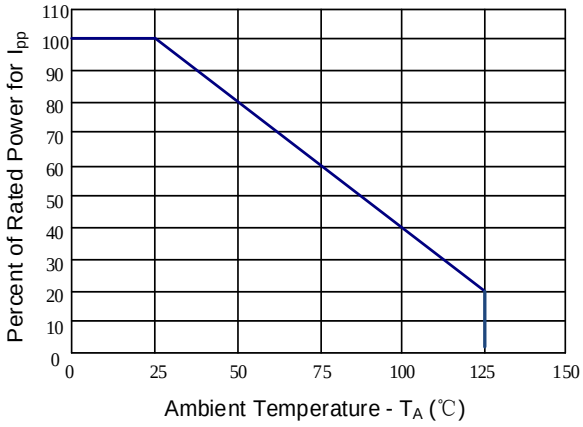


Figure 3: Clamping Voltage vs. Peak Pulse Current

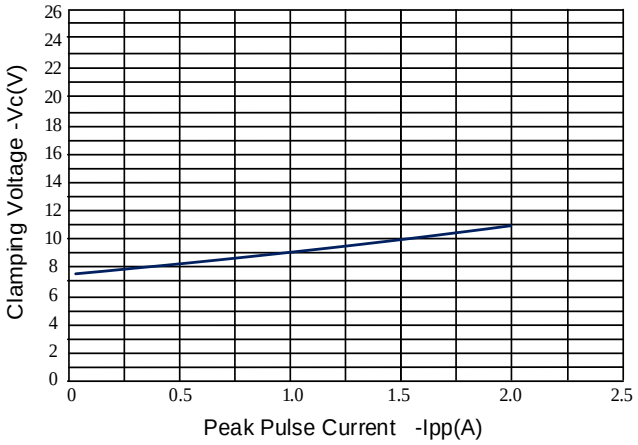


Figure 4: Normalized Junction Capacitance

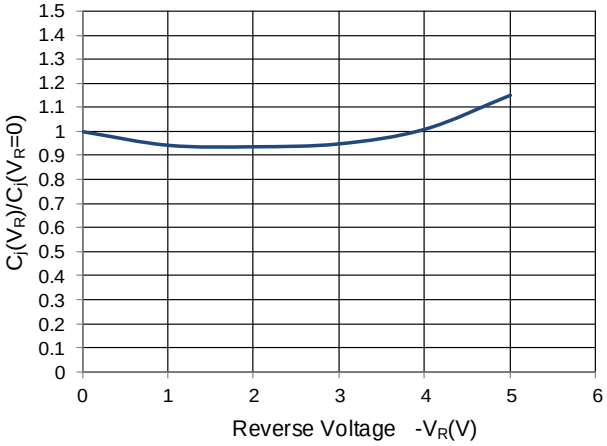


Figure 5: TLP Positive I-V Curve

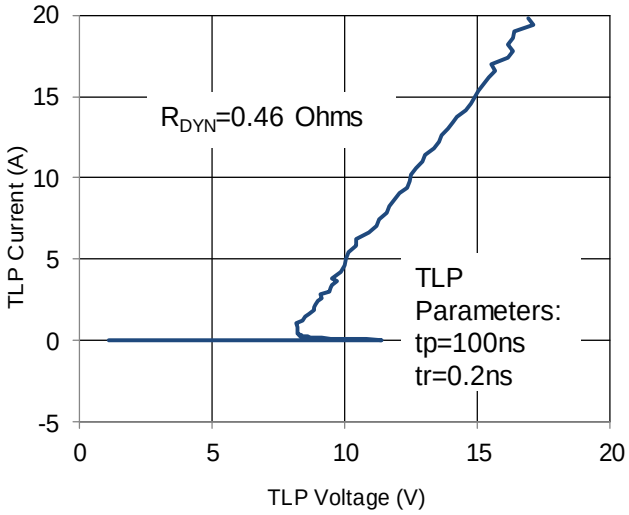
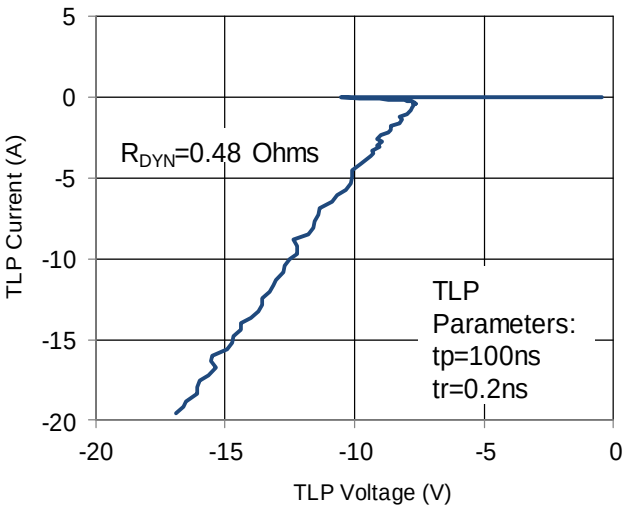
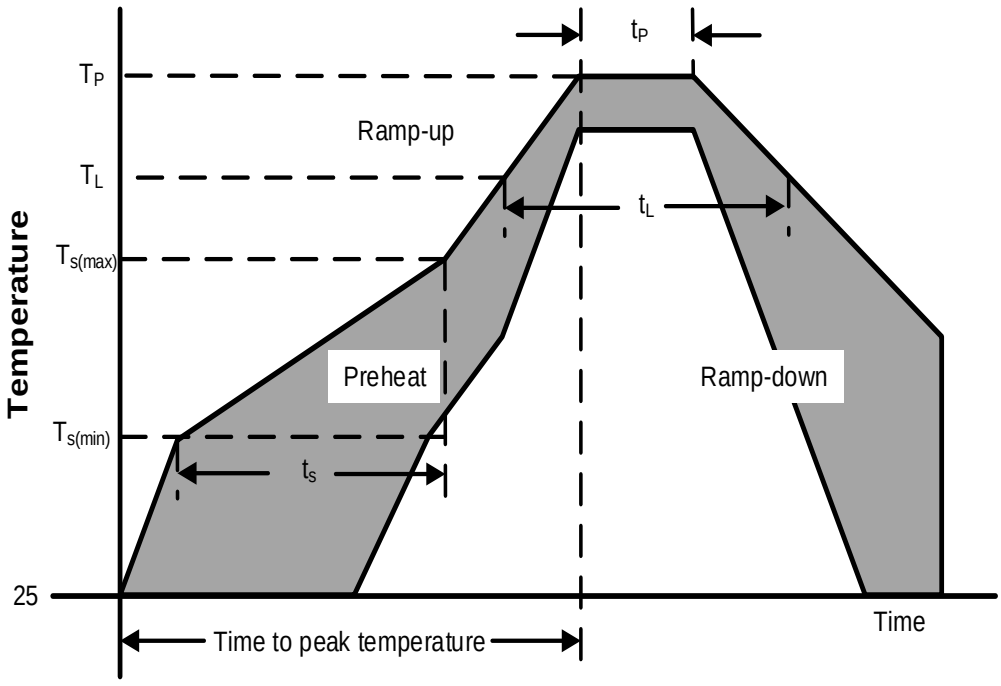


Figure 6: TLP Negetive I-V Curve



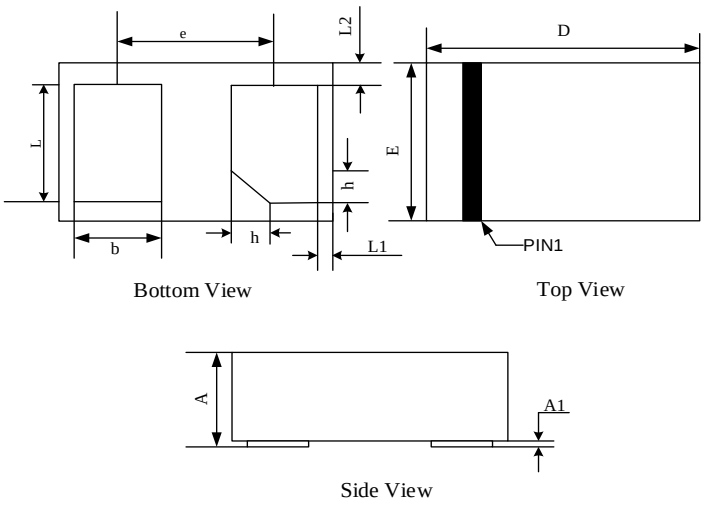
Soldering Parameters

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



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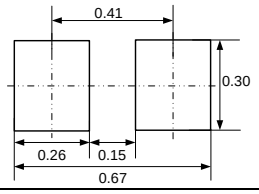
SYMBOL	MILLIMETERS		
	NOM	MIN	MAX
A	--	0.280	0.320
A1	--	--	0.050
D	0.610	0.570	0.630
E	0.310	0.270	0.330
b	0.180	0.155	0.205
L	0.240	0.200	0.260
h	--	0.050	0.100
L1	0.035REF		
L2	0.035REF		
e	0.360BSC		

Land Pattern



Marking Codes

Part Number	Marking Code
WE05DLCMS-B	PIN 1 C M C = Specific Device Code M = Month Code

Package Information

Qty：15k/Reel

CONTACT INFORMATION

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