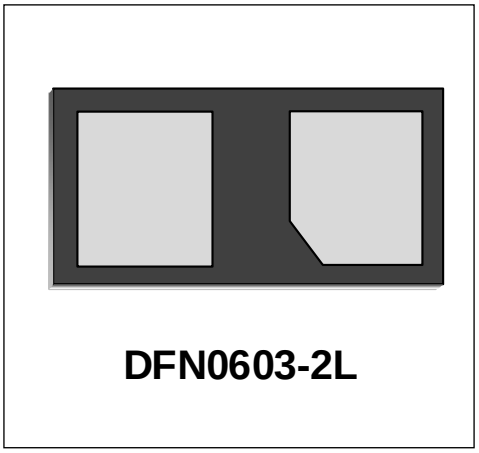
CYG WAYON
Let's make electronics safer!

WE03DS-B

Order Code: WE03DS-B-01

Transient Voltage Suppressor

Features



DFN0603-2L

- Small Body Outline Dimensions:0.60 mm x 0.30 mm
- 100 Watts Peak Pulse Power per Line (t_p=8/20μs)
- Bidirectional ESD Protection of one line
- Low Clamping Voltage
- Working Voltage: 3.3 V
- Low Leakage Current

IEC COMPATIBILITY (EN61000-4)

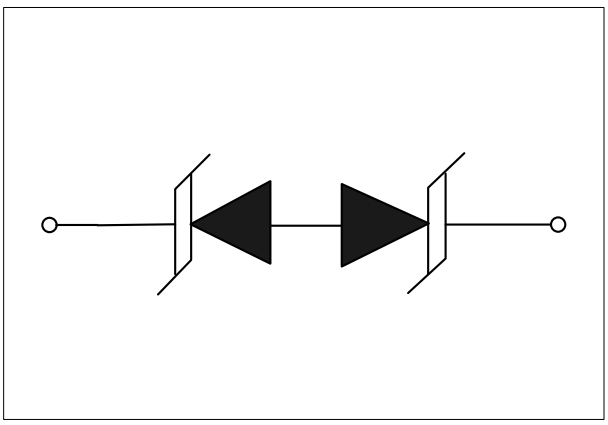
- **IEC 61000-4-2 (ESD) ±30kV (air), ±30kV (contact)**
- **IEC 61000-4-4 (EFT) 40A (5/50ns)**
- **IEC 61000-4-5 (Lightning)7A (8/20μs)**

Mechanical Characteristics Applications

- DFN0603-2L package
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel per EIA 481
- RoHS Compliant

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

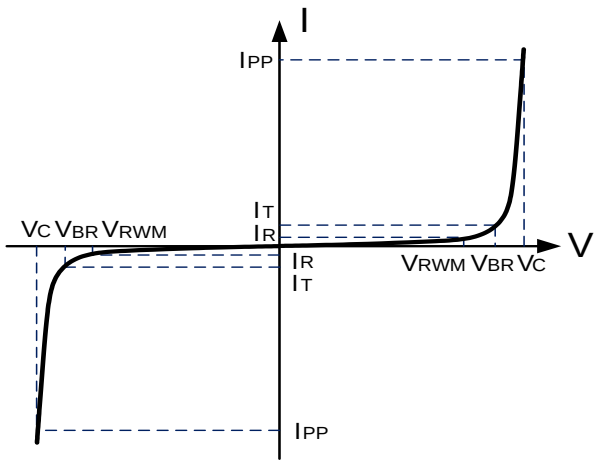
Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	**Symbol**	**Value**	**Units**
Peak Pulse Power（t_p =8/20μs）	P_{PP}	100	W
Peak Pulse Current（t_p =8/20μs）	I_{PP}	7	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}	Reverse Stand-Off Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Electrical Characteristics

WE03DS-B						
Parameter	**Symbol**	**Conditions**	**Minimum**	**Typical**	**Maximum**	**Units**
Reverse Stand-Off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	3.7		7.0	V
Reverse Leakage Current	I_R	V_{RWM}=3.3V,T=25°C			200	nA
Clamping Voltage	V_C	I_{PP}=1A,t_p=8/20μs		5.5	7.0	V
Clamping Voltage	V_C	I_{PP}=7A,t_p=8/20μs		8.0	10.0	V
ESD Clamping Voltage[1]	V_C	I_{PP} = 4A t_p = 0.2/100ns		6.0		V
ESD Clamping Voltage[1]	V_C	I_{PP} = 16A t_p = 0.2/100ns		9.5		V
Dynamic Resistance[1,2]	R_{DYN}	TLP=0.2/100ns		0.3		Ω
Junction Capacitance	C_j	V_R = 0V, f= 1MHz		7.5	8.5	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

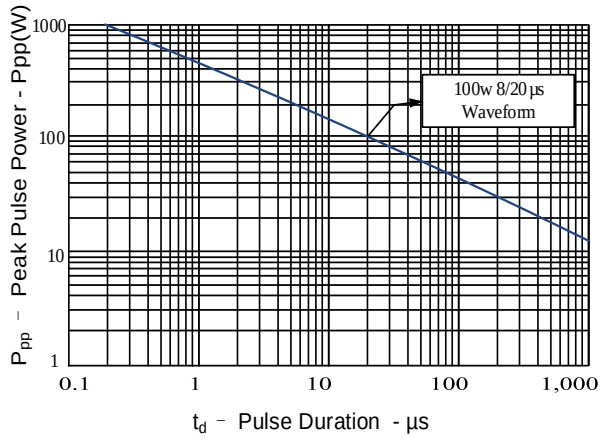


Figure 2: Power Derating Curve

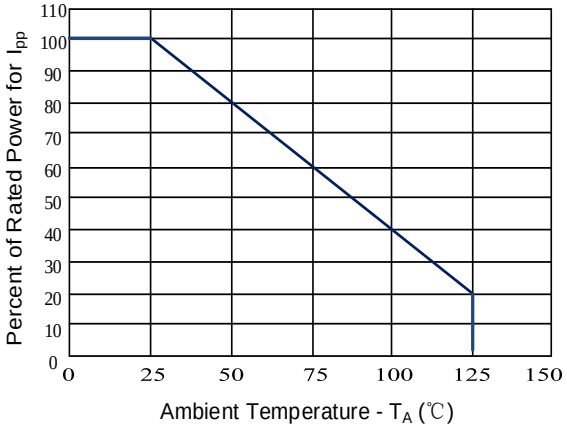


Figure 3: Clamping Voltage vs. Peak Pulse Current

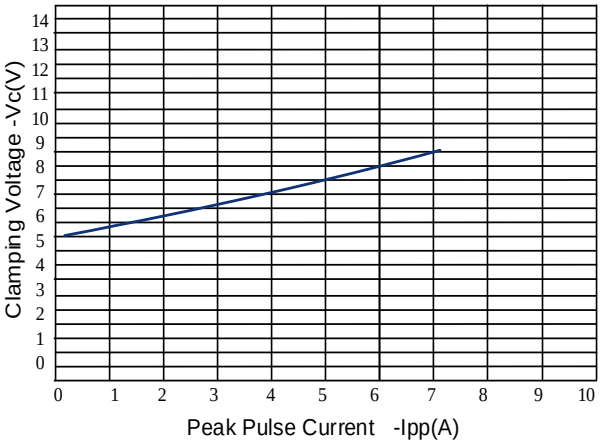


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

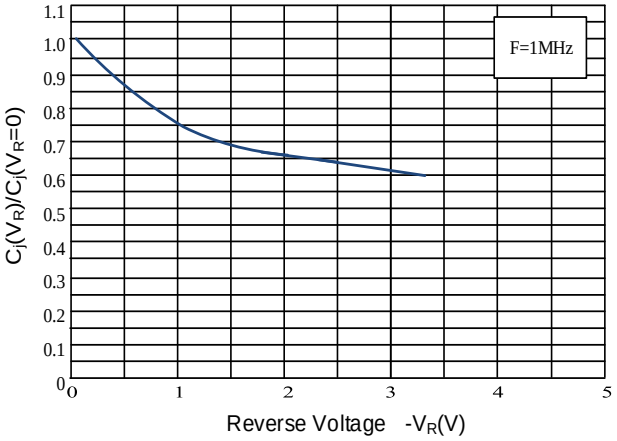


Figure 5: TLP Positive I-V Curve

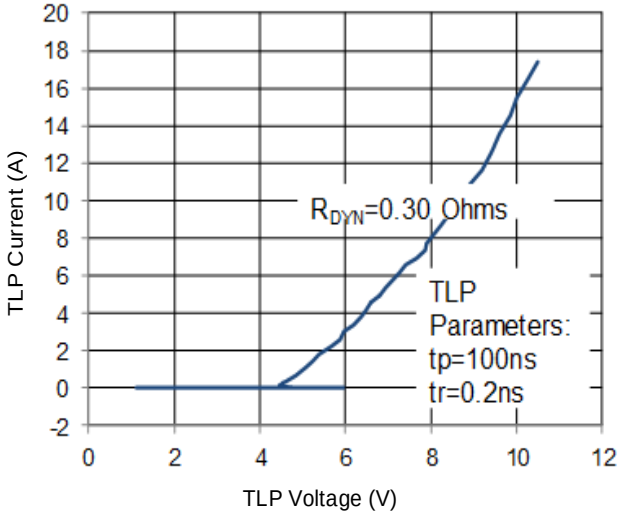
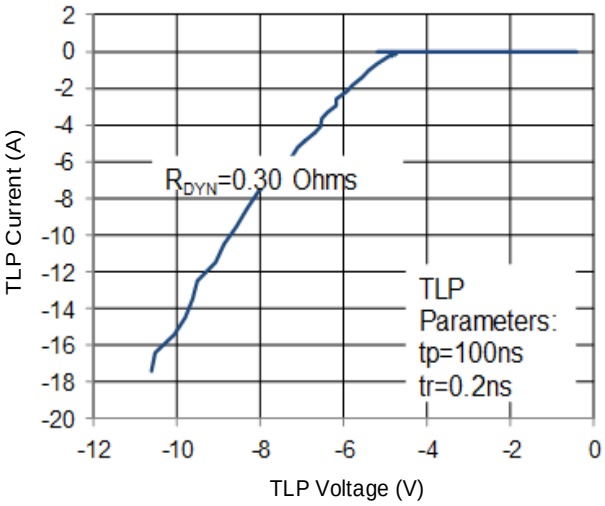
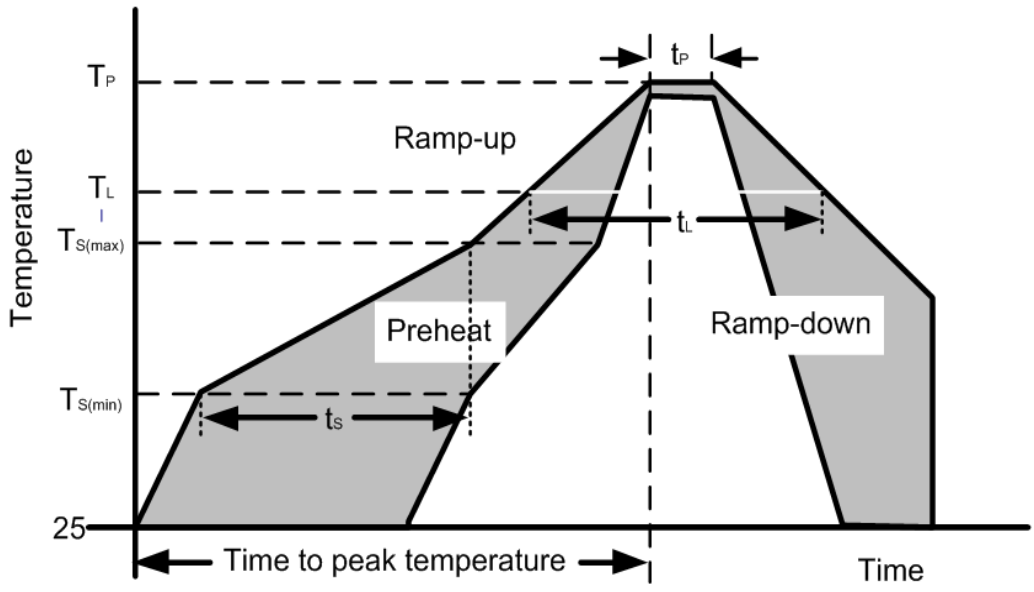


Figure 6: TLP Negative I-V Curve



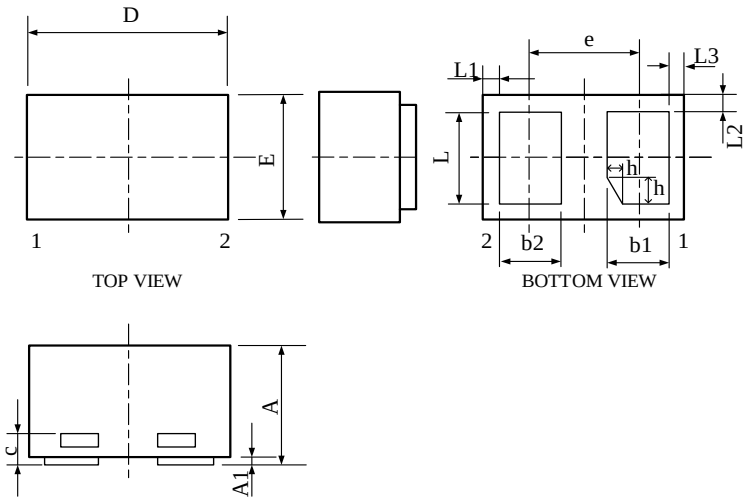
Soldering Parameters

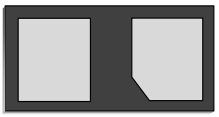
Reflow Condition		Pb – Free assembly
Pre Heat	Temperature Min ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (ts)	60 – 190 secs
Average ramp up rate (Liquidus Temp) (T_L) to peak		5°C/second max
$T_{S(max)}$ to T_L——Ramp-up Rate		5°C/second max
Reflow	Temperature (T_L) (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

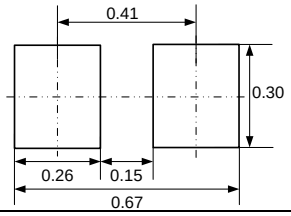




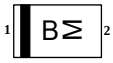
DFN0603-2L

SYMBOL	MILIMETER	
	MIN	MAX
A	0.28	0.32
A1	0.00	0.05
b1	0.13	0.23
b2	0.14	0.24
c	0.05	0.15
D	0.55	0.65
e	0.350BSC	
L1	0.030BSC	
L2	0.025BSC	
L3	0.035BSC	
E	0.25	0.35
L	0.20	0.30
h	0.00	0.10

Land Pattern



Marking Codes

Part Number	WE03DS-B	Marking Code	 B = Specific Device Code M = Month Code

Package Information

Qty：15k/Reel

CONTACT INFORMATION

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