WS26P4N

Transient Voltage Suppressor

Features

- 5880 Watts Peak Power (tp = 8/20μs)
- Excellent Clamping Capability
- Low Inductance
- Low profile package



DFN2020-2L
(bottom view)

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) 120A (8/20μs)

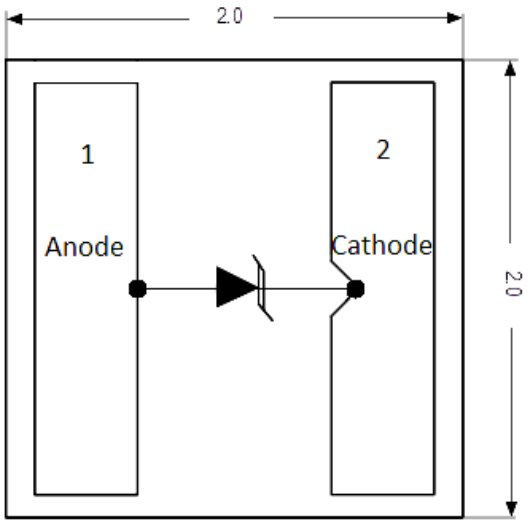
Mechanical Characteristics

- DFN2020-2L package
- Marking : Making Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Computer & Consumer Electronics
- Industrial Electronics
- Microcontroller Input Protection

PIN Configuration

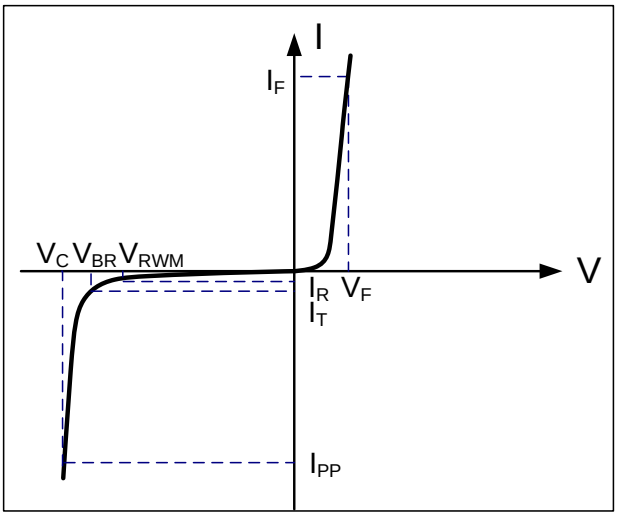


©2019 WAYON Corporation

Absolute Maximum Rating			
Rating	**Symbol**	**Value**	**Units**
Peak Pulse Power（t_p=8/20μs）	P_{PP}	5880	Watts
Peak Pulse Current（t_p=8/20μs）	I_{PP}	120	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
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

WS26P4N						
Parameter	**Symbol**	**Conditions**	**Minimum**	**Typical**	**Maximum**	**Units**
Reverse Stand-Off Voltage	V_{RWM}				26.0	V
Breakdown Voltage	V_{BR}	I_T=1mA	28.0		32.5	V
Forward Voltage	V_F	I_F=10 mA	0.4		1.0	V
Reverse Leakage Current	I_R	V_{RWM}=26V T=25°C			500	nA
Clamping Voltage	V_C	I_{PP}=120A,t_p=8/20μs		49.0	55.0	V
Dynamic Resistance[1,2]	R_{DYN}	TLP=0.2/100ns		0.06		Ω
ESD Clamping Voltage[1]	V_C	IPP = 4A, tp = 0.2/100ns (TLP)		28.9		V
ESD Clamping Voltage[1]	V_C	IPP = 16A, tp = 0.2/100ns (TLP)		29.6		V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz		700		pF

Notes：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

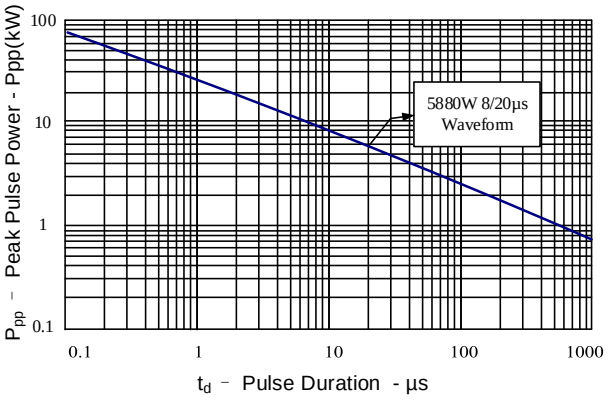


Figure 2: Power Derating Curve

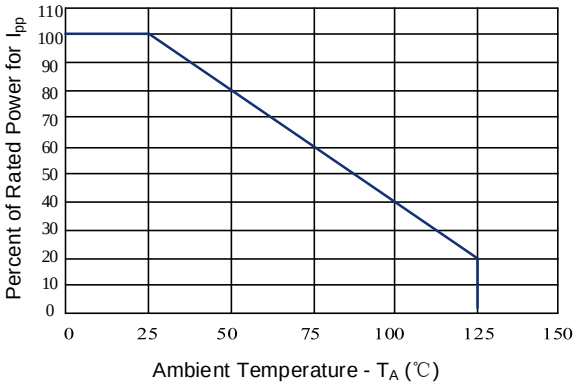


Figure 3: Clamping Voltage vs. Peak Pulse Current

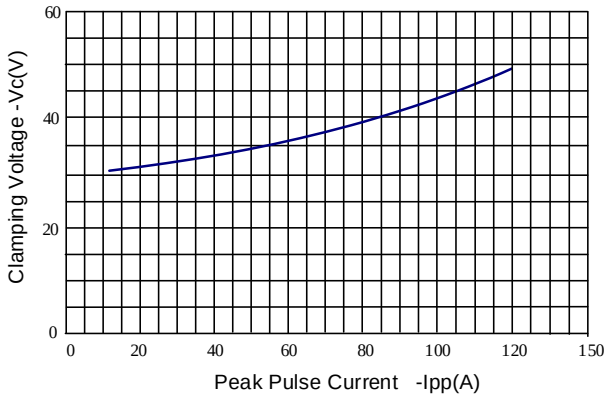


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

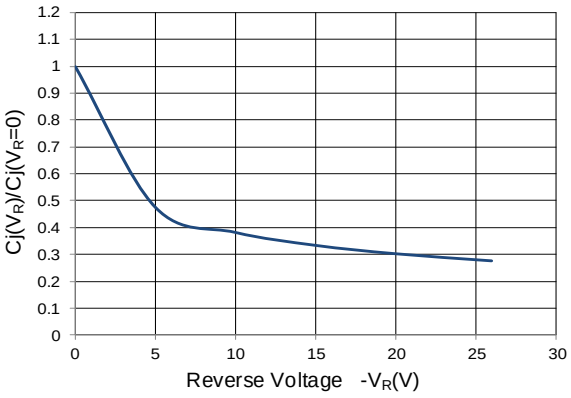


Figure 5: 8/20μs Pulse Waveform

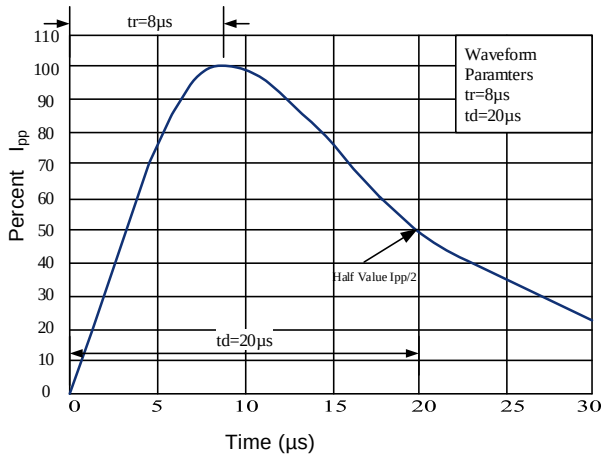
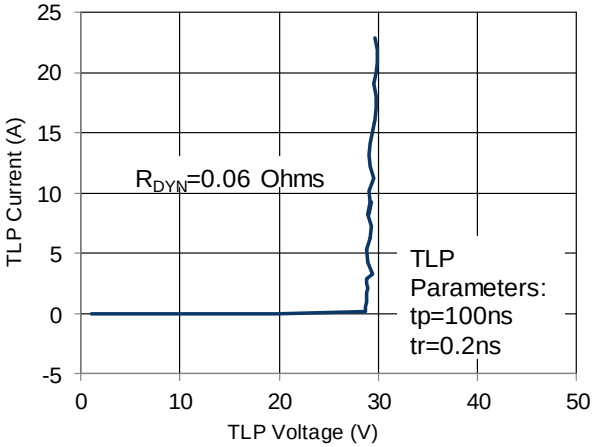
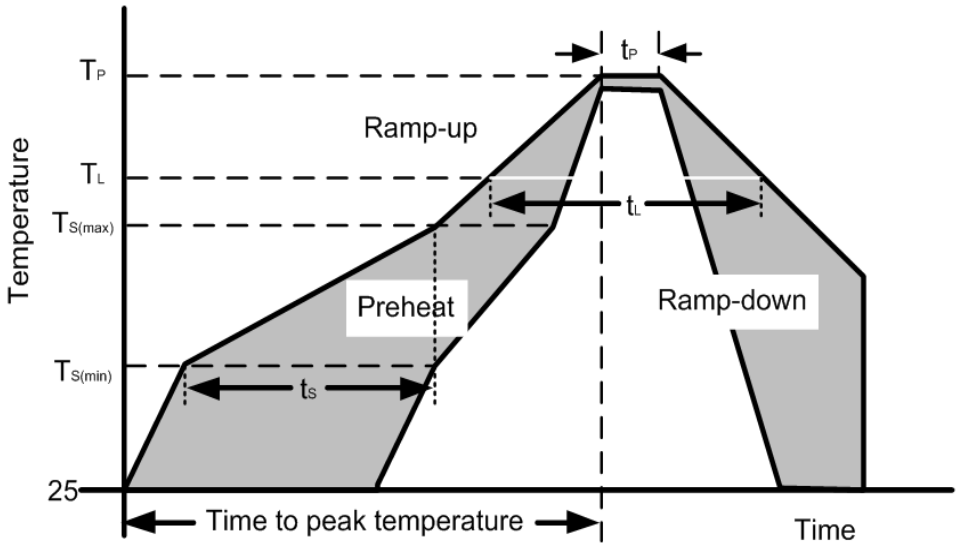


Figure 6: TLP I-V Curve



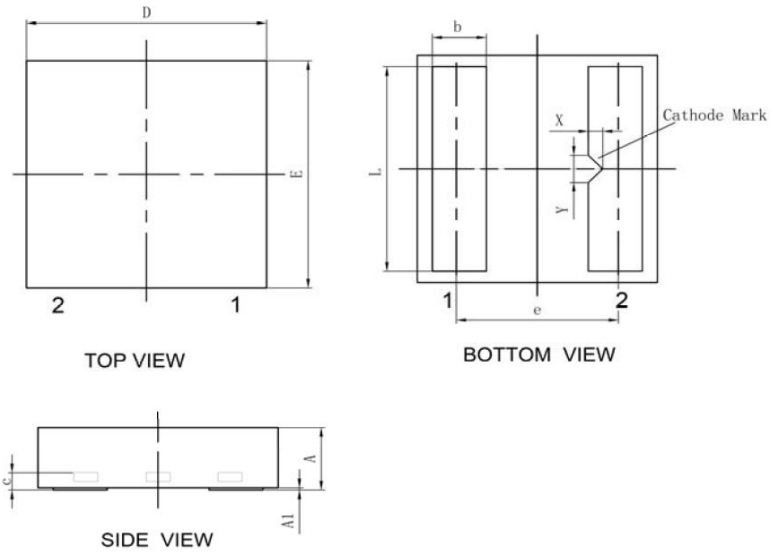
Soldering Parameters

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



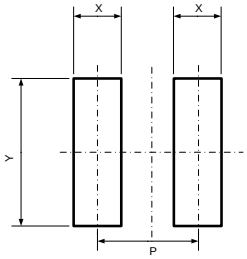
Outline Drawing –DFN2020-2L

PACKAGE OUTLINE





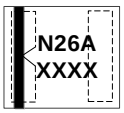
SYMBOL	DIMENSIONS MILLIMETER		
	MIN	NOM	MAX
A	0.50	0.55	0.60
A1	0.00	0.02	0.05
b	0.35	0.45	0.55
C		0.152REF	
D	1.90	2.00	2.10
e		1.35BSC	
E	1.90	2.00	2.10
L	1.70	1.80	1.90
X	-	-	0.12
Y	-	-	0.24



DIMENSIONS	
DIM	MILLIMETERS
P	1.35 TYP
X	0.65
Y	2.00

Notes:
Controlling Dimension: Millimeter.

Marking Codes

Part Number	Marking Code
WS26P4N	

Package Information

Qty：3k/Reel

CONTACT INFORMATION

No.1001, Shiwan(7) Road, Pudong District, Shanghai, P.R.China.201207
Tel: 86-21-68969993 Fax: 86-21-50757680 Email: market@way-on.com
WAYON website: **http://www.way-on.com**

For additional information, please contact your local Sales Representative.

WAYON ® is registered trademark of Wayon Corporation.

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.