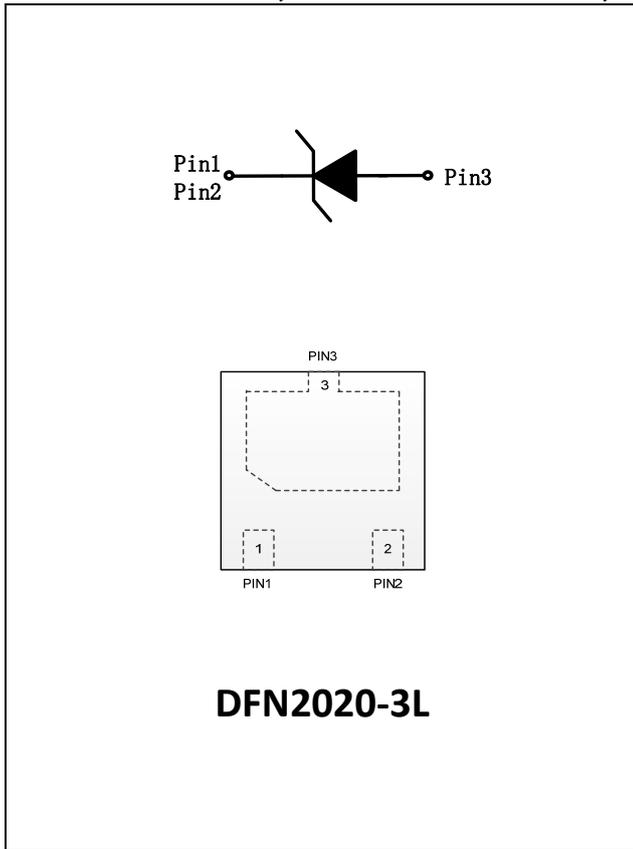


## 1-Line, Uni-directional, Transient Voltage Suppressor



### Features

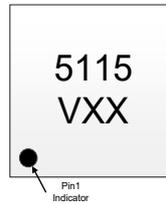
- Ultra small package
- Stand-off voltage: 24-30V Max
- Transient protection for each line according to IEC61000-4-2(ESD):  $\pm 30\text{kV}$  (contact)
- Low leakage current
- Low clamping voltage
- RoHS Compliant

### Applications

- Power supply protection
- Power management
- Battery Contacts

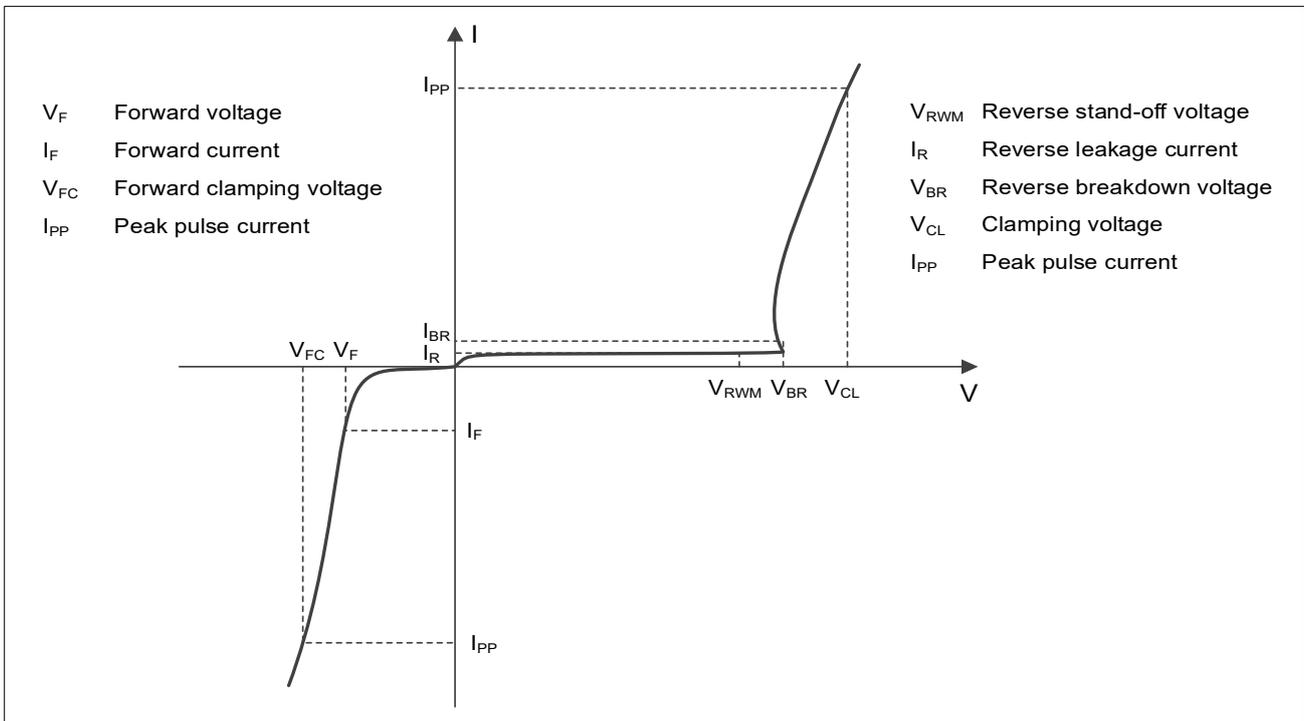
### Mechanical Characteristics

- Package: DFN2020-3L
- Case Material: "Green" Molding Compound.
- Marking Information: See Below



Device	Device code
PESD24VP4A2	V24
PESD30VP4A2	V30

### Definitions of electrical characteristics





# PESD24VP4A2 THRU PESD30VP4A2

## ■Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power ( $t_p = 8/20\mu s$ )	$P_{pk}$	7500	W
ESD according to IEC61000-4-2 air discharge	$V_{ESD}$	$\pm 30$	KV
ESD according to IEC61000-4-2 contact discharge		$\pm 30$	KV
Junction temperature	$T_J$	125	°C
Storage temperature	$T_{STG}$	-55~150	°C

## ■Electrical Characteristics (Ta=25°C Unless otherwise specified)

Type number	Reverse Standoff Voltage VRWM (V)	Breakdown voltage VBR(V) IBR = 1mA			Reverse leakage current IRM(nA) at VRWM		Forward voltage VF(V) IF = 20mA		Junction capacitance F=1MHz, VR=0V (pF)	
	Max	Min	Typ	Max	Typ	Max	Min	Max	Typ	Max
PESD24VP4A2	24	25.5		29.0	-	1000	0.45	1.25	650	750
PESD30VP4A2	30	31.5		34.5	-	1000	0.45	1.25	550	650

Type number	Rated peak pulse current $I_{PP}$ (A) <sup>1)2)</sup>		Clamping voltage $V_{CL}$ (V) at $I_{PP}$ (A) <sup>1)2)</sup>	
	Max.		Typ.	Max.
PESD24VP4A2	220		31.5	35
PESD30VP4A2	200		38	40

- (1). TLP parameter:  $Z_0 = 50\Omega$ ,  $t_p = 100ns$ ,  $t_r = 2ns$ , averaging window from 60ns to 80ns.  $R_{DYN}$  is calculated from 4A to 16A.
- (2). Contact discharge mode, according to IEC61000-4-2.
- (3). Non-repetitive current pulse, according to IEC61000-4-5.

## ■Ordering Information (Example)

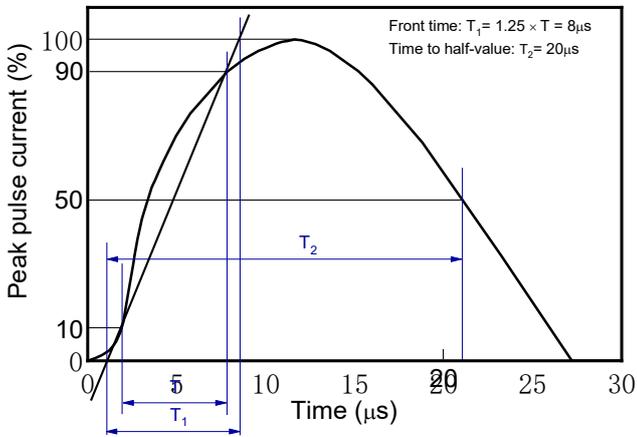
PREFERRED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PESDxxVP4A2	Approximate 10	3000	30000	120000	Tae& reel



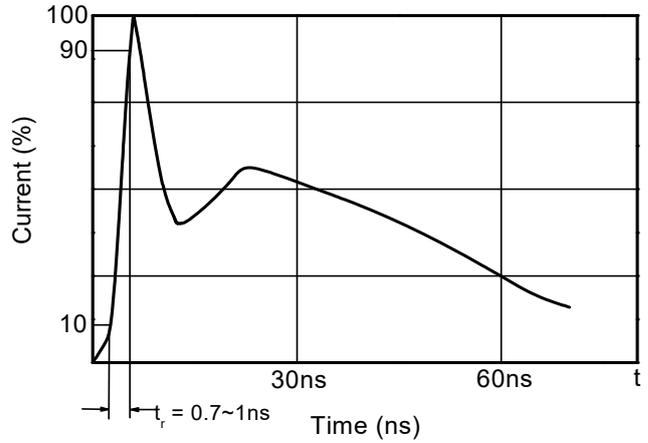
# PESD24VP4A2 THRU PESD30VP4A2

## ■ Typical Performance Characteristics ( $T_a=25^\circ\text{C}$ unless otherwise Specified)

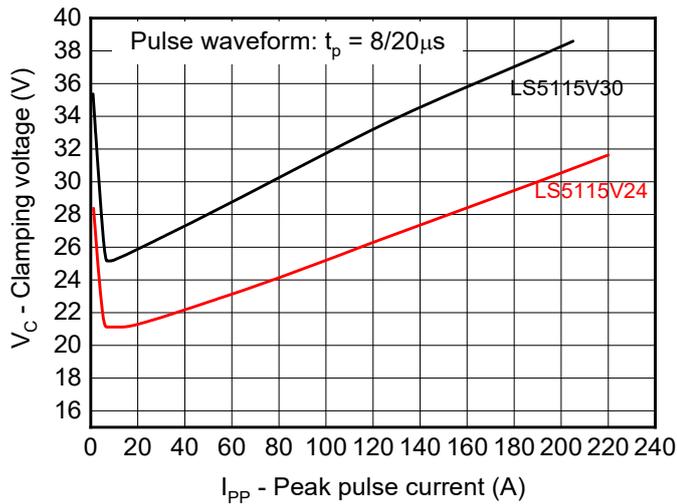
### 8/20 $\mu\text{s}$ waveform per IEC61000-4-5



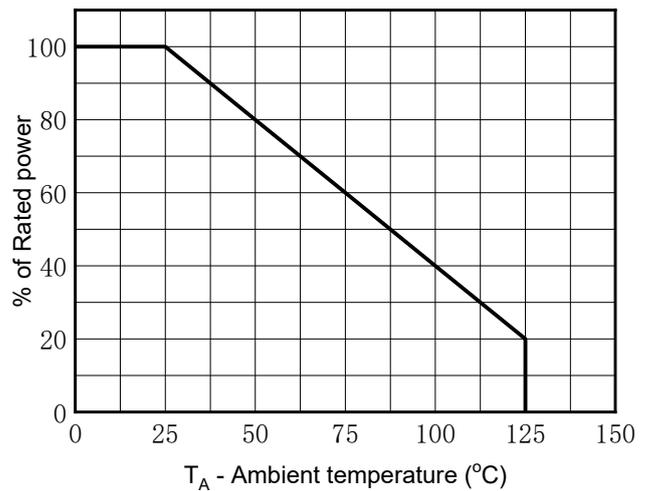
### Contact discharge current waveform per IEC61000-4-2



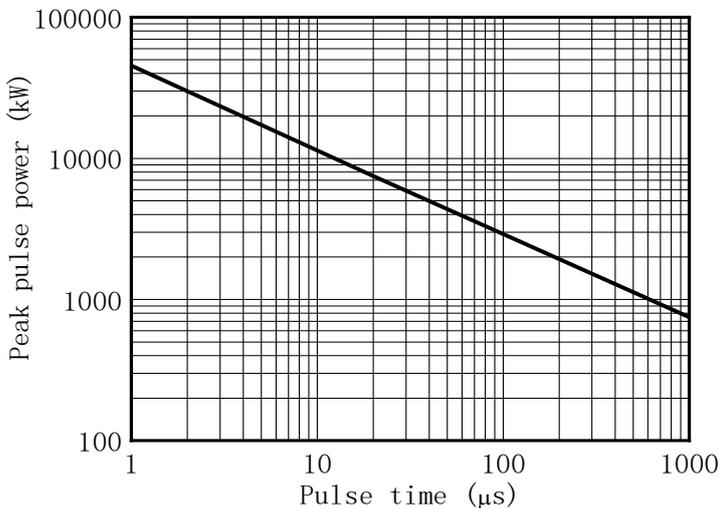
### Clamping voltage vs. Peak pulse current



### Power derating vs. Ambient temperature



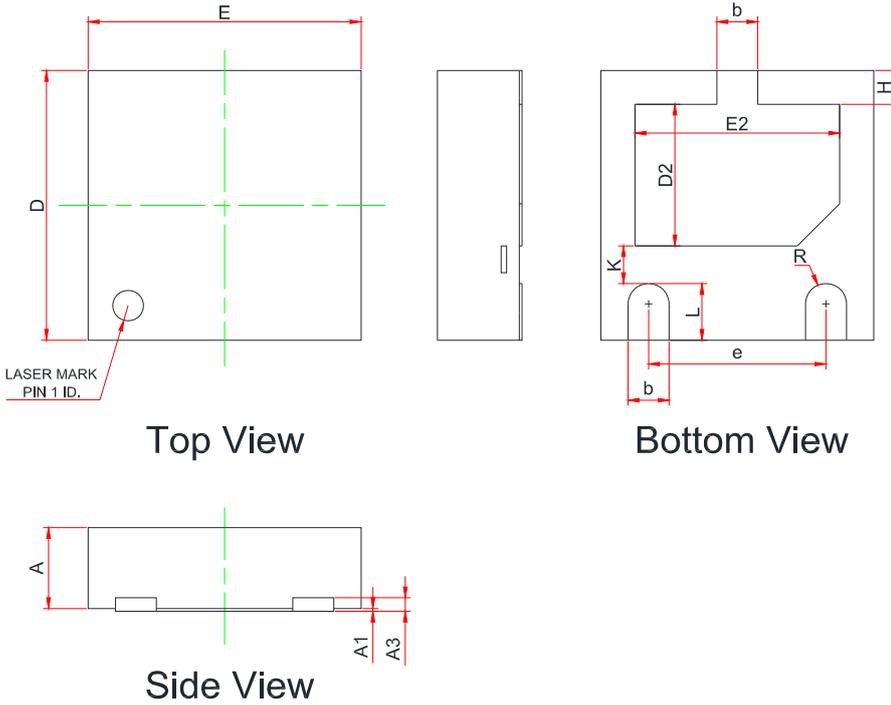
### Non-repetitive peak pulse power vs. Pulse time





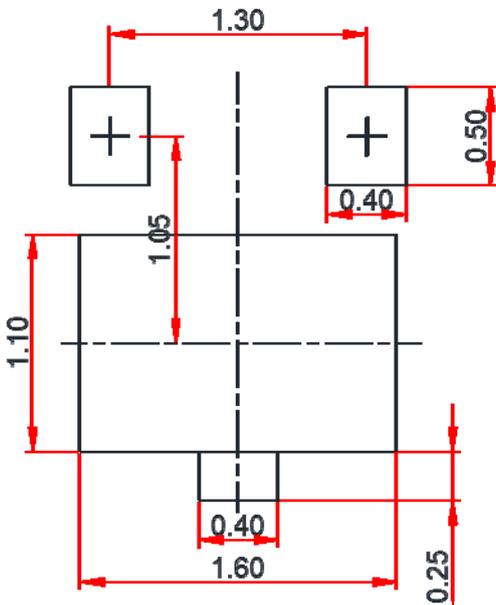
# PESD24VP4A2 THRU PESD30VP4A2

## ■ Outline Dimensions



Symbol	Dimensions In Millimeters		
	Min.	Typ.	Max.
A	0.50	0.60	0.65
A1	0.00	0.02	0.05
A3	0.15 REF.		
b	0.25	0.30	0.35
D	1.90	2.00	2.10
E	1.90	2.00	2.10
D2	0.95	1.05	1.15
E2	1.40	1.50	1.60
e	1.20	1.30	1.40
H	0.20	0.25	0.30
K	0.20	0.30	0.40
L	0.35	0.40	0.45
R	0.13	-	-

## ■ Recommend land pattern (Unit:mm)



### Notes:

This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met



## PESD24VP4A2 THRU PESD30VP4A2

---

### Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.