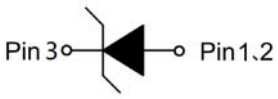
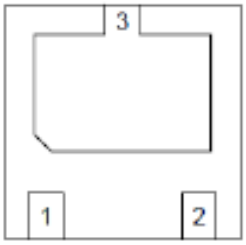
1-Line , Uni-directional , Transient Voltage Suppressor





DFN2020-3L

Features

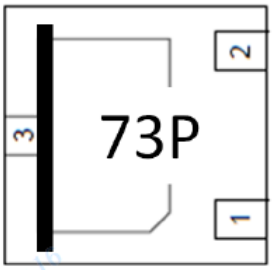
- Ultra small package
- Stand-off voltage: 7V
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-5(surge): 275A (8/20ns)
- Low clamping voltage
- RoHS Compliant

Applications

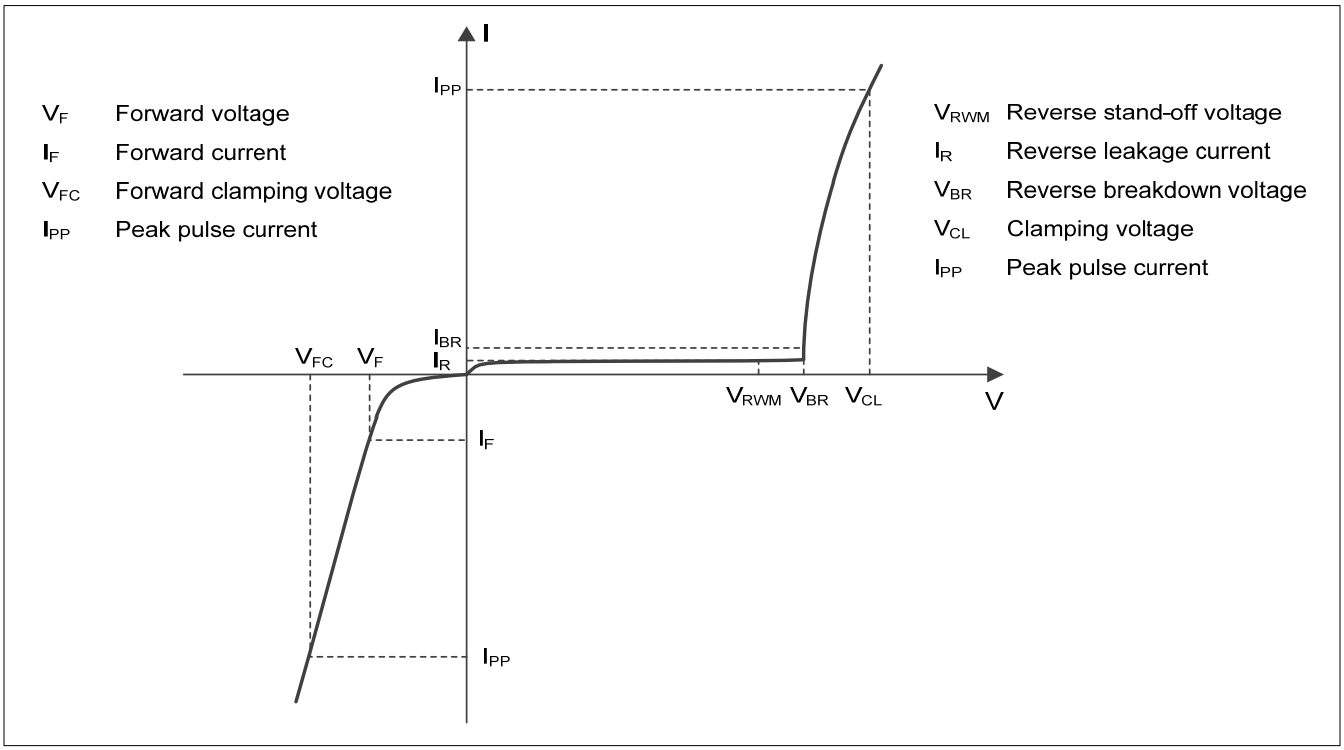
- Power Management
- Industrial Application
- Power Supply Protection

Mechanical Characteristics

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



■Definitions of electrical characteristics



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

PARAMETER	SYMBOL	VALUE	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	6000	W
Peak pulse Current (t_p = 8/20μs)	I_{PP}	275	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	KV
ESD according to IEC61000-4-2 contact discharge		±30	KV
Junction temperature	T_J	-55~125	℃
Storage Temperature Range	T_{STG}	-55~150	℃

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				7
Reverse leakage current	I_R	uA	V_{RWM} = 7V,			1
Reverse breakdown voltage	$V_{(BR)}$	V	I_T = 1mA,	7.5		
Clamping voltage	V_{CL}	V	I_{PP} = 20A, t_p = 8/20μs			10
		V	I_{PP} = 275A, t_p = 8/20μs			22
Junction capacitance	CJ	pF	V_R = 0V, f = 1MHz			1000

Notes:

(1). TLP parameter: Z0 = 50Ω, tp = 100ns, tr = 2ns, averaging window from 60ns to 80ns. RDYN is calculated from 4A to 16A.

(2). Contact discharge mode, according to IEC61000-4-2.

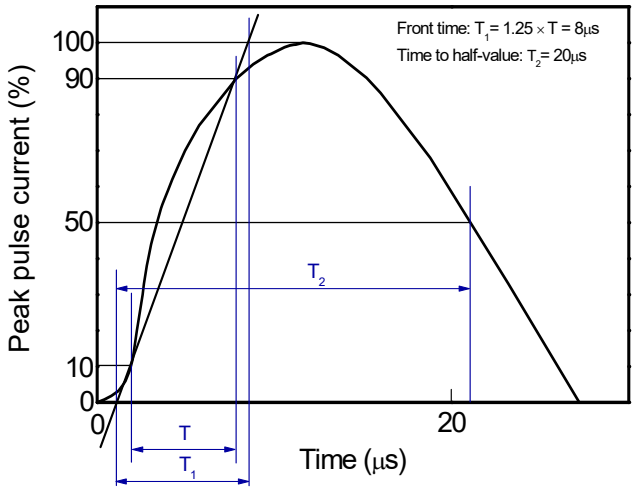
(3). Non-repetitive current pulse, according to IEC61000-4-5

■Ordering Information (Example)

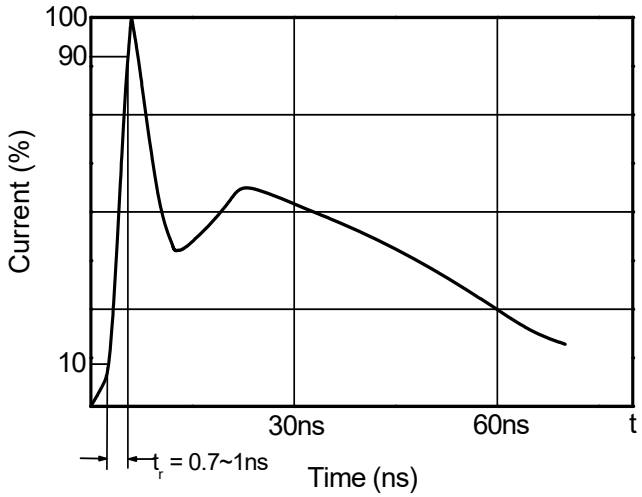
PREFERED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD7V0P4A	Approximate 10	3000	30000	120000	Tape & reel

■Typical Performance Characteristics (T_a=25℃ unless otherwise Specified)

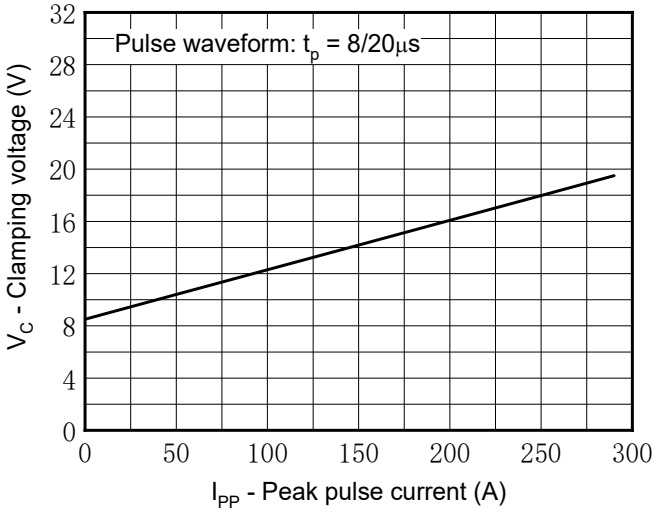
8/20μs waveform per IEC61000-4-5



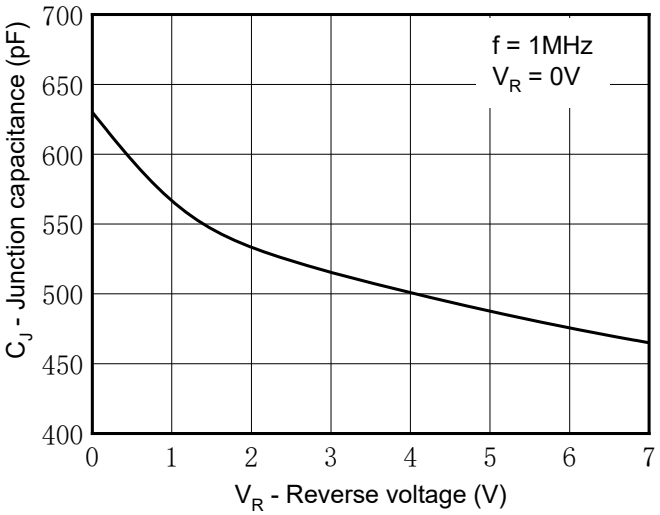
Contact discharge current waveform per IEC61000-4-2



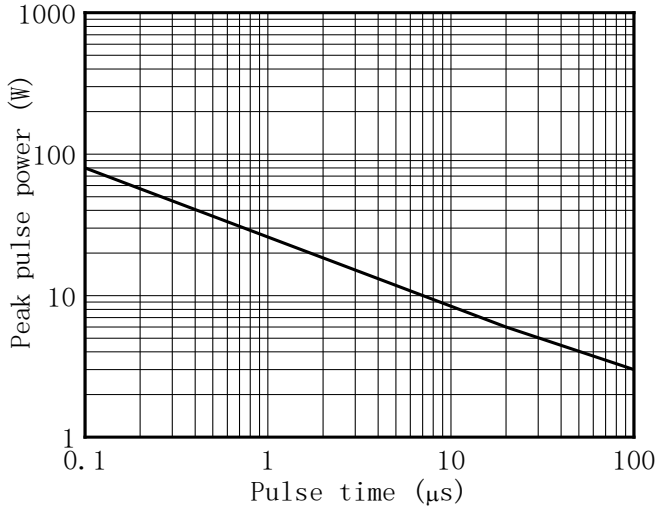
Clamping voltage vs. Peak pulse current



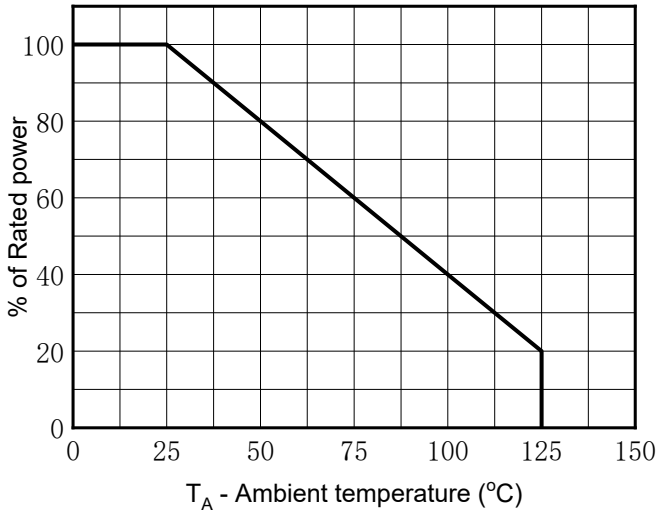
Capacitance vs. Reverse voltage



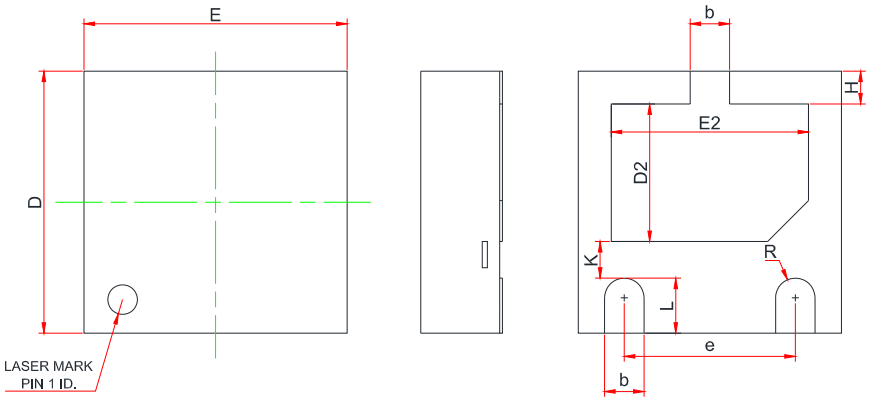
Non-repetitive peak pulse power vs. Pulse time

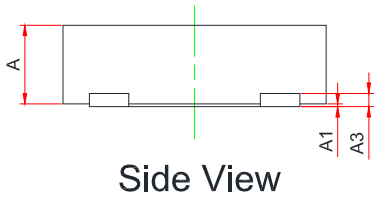


Power derating vs. Ambient temperature



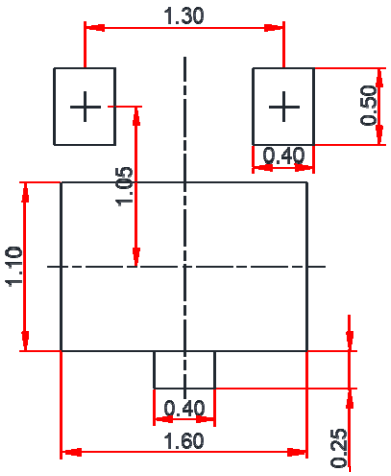
■Outline Dimensions





Symbol	Dimensions In Millimeters		
	Min.	Typ.	Max.
A	0.55	0.60	0.65
A1	0.00	0.02	0.05
A3		0.10 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.

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