ESDSHLC7V001P4

ESD Ddiode

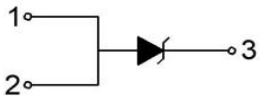
1. Features

DFN2020-3L

- 3-pin lead-less package
- Junction capacitance (Max value: 2300pF)
- Peak Pulse current (8/20μs) Max:275A
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- Low clamping voltage
- Low leakage current
- Working voltages:7V
- RoHS Compliant

2. Mechanical Data

- Case:Molded Plastic,DFN2020-3L.
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking:N07A
- Marking:marked on body.



3. Maximum Ratings

Electrical Characteristics Rating at 25℃ ambient temperature unless otherwise specified.

Characteristic	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P_{PP}	6050	W
Peak Pulse Current (8/20μs)	I_{PP}	275	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±30 ±30	KV
Junction Temperature	T_j	-55～+125	℃
Storage Temperature	T_{stg}	-55～+150	℃

4. Electrical Characteristics (T_A=25℃ unless otherwise noted)

Characteristics	Symbol	Condition	Min	TYP	Max	Unit
Reverse Working Voltage	V_{RWM}		-	-	7	V
Reverse Breakdown Voltage	V_{BR}	I_R = 1mA	7.5	-	9..5	V
Reverse Leakage Current	I_R	V_R =7V	-	-	1	uA
Clamping voltage	V_C	I_{PP} = 40A,T_P=8/20us	-	-	12.5	V
Clamping voltage	V_C	I_{PP} = 275A,T_P=8/20us	-	-	22	V
Junction capacitance	C_J	V_R =0V,f =1MHz	-	-	2300	pF

5. Rating And Characteristic Curves

FIG1：Power rating derating curve

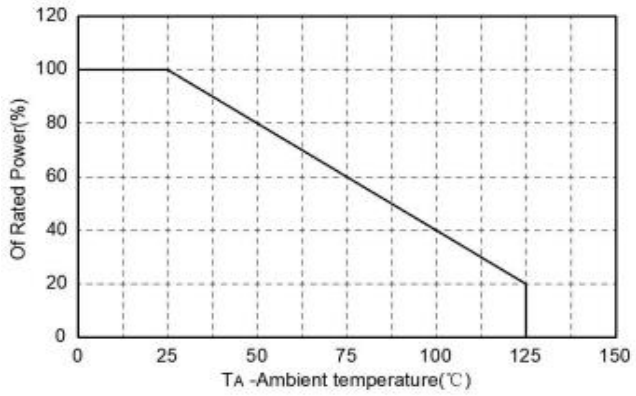


FIG2： pulse Waveform

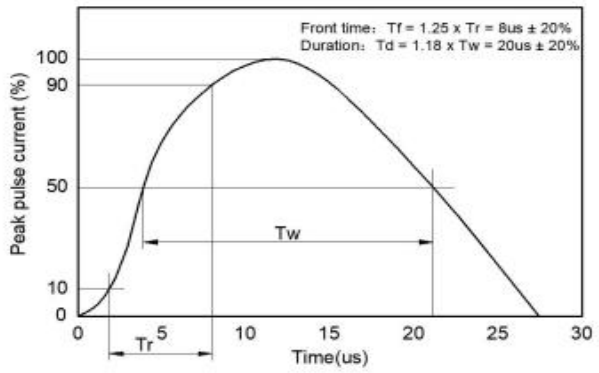


FIG3：Capacitance between teminals charateristics

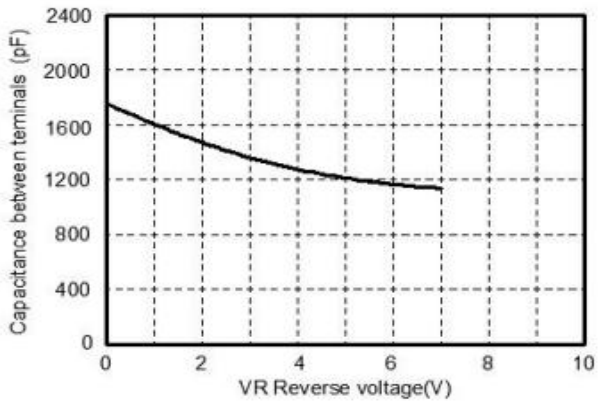
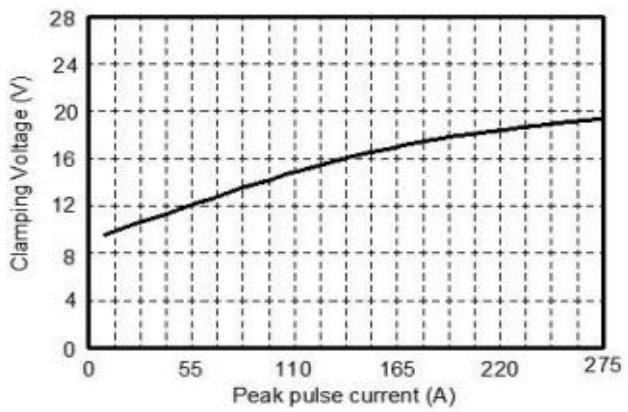
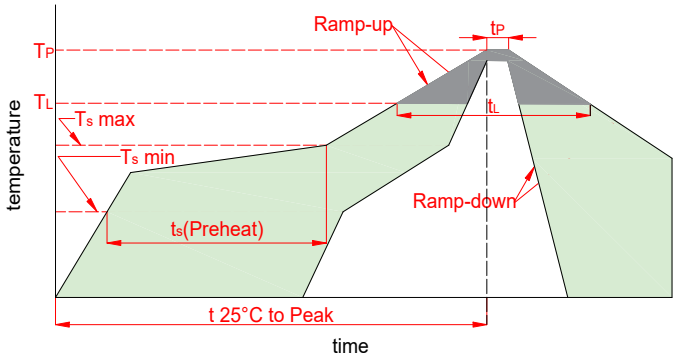


FIG4: Clamping Voltage vs. Peak Pulse Current

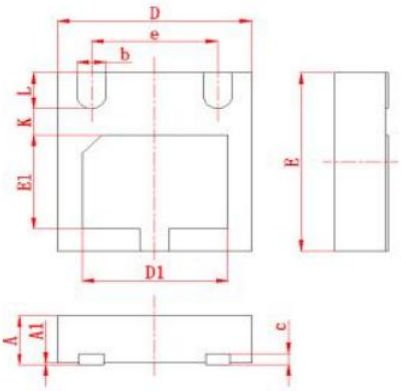


6. Soldering Parameters

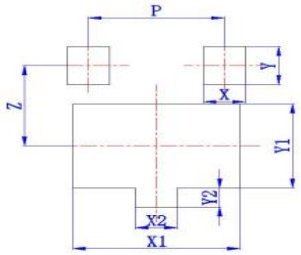


Reflow Condition		Lead-free
Pre Heat	Temp. min(T_s(min))	150℃
	Temp. max(T_s(min))	200℃
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3℃/s max
T_S(max) to T_L-Ramp-up Rate		3℃/s max
Reflow	Temp.(T_L)(Liquidus)	217℃
	Temp.(t_L)(Liquidus)	60~150s
Peak Temp.(T_P)		$260^{+0/-5}$℃
Time within actual peak Temp.(t_p)		30s max
Ramp-down Rate		6℃/s max
Time 25℃ to peak Tempe.(T_p)		8 minutes max
Do not exceed		260℃

7. Dimensions



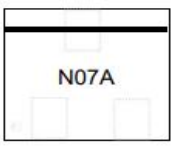
Mounting PAD Layout



Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A	0.020	0.024	0.50	0.60
A1	0.000	0.002	0.00	0.05
D	0.075	0.083	1.90	2.10
D1	0.055	0.063	1.40	1.60
E	0.075	0.083	1.90	2.10
E1	0.037	0.045	0.95	1.15
K	0.012		0.30	
e	0.051		1.30	
c	0.005		0.13	
b	0.010	0.014	0.25	0.35
L	0.014	0.018	0.35	0.45
X	0.016		0.40	
X1	0.063		1.60	
X2	0.016		0.40	
Y	0.020		0.50	
Y1	0.043		1.10	
Y2	0.010		0.25	
P	0.051		1.30	
Z	0.043		1.10	

8. Part Marking System

Cathode Band



9. Package Information

Package	Part Number	Marking Code	Quantity(pcs)
DFN2020-3L	ESDSHLC7V001P4	N07A	3000

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