

FEATURES

- | 5200W Peak Pulse Power per Line (tp=8/20μs)
- | Solid-state silicon-avalanche technology
- | Capacitance: 1000pF typical
- | Low clamping voltage
- | Low leakage current
- | Meet AEC-Q101 Requirements

APPLICATIONS

- | Power management
- | Power Line Protection
- | Industrial Controls
- | Fast Chargers



DFN2020-3L

18A

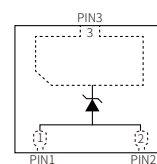
Marking

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

- RoHS** Compliance with 2011/65/EU
- HF** Compliance with IEC61249-2-21:2003



Schematic Symbol

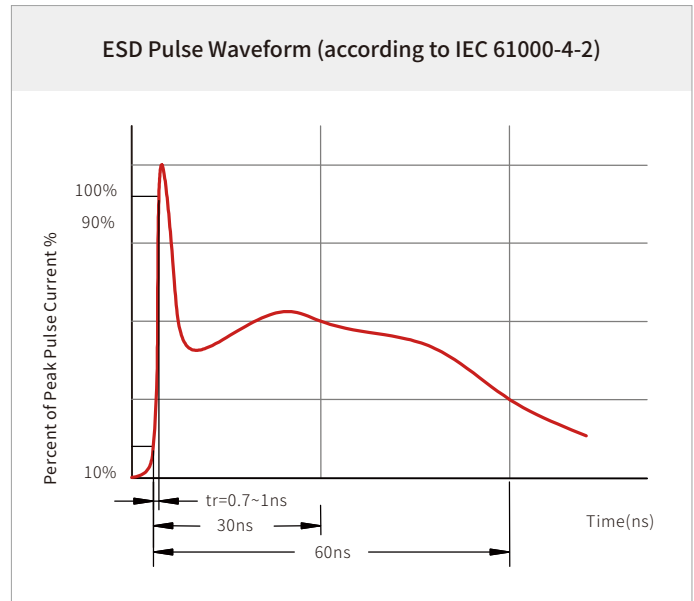
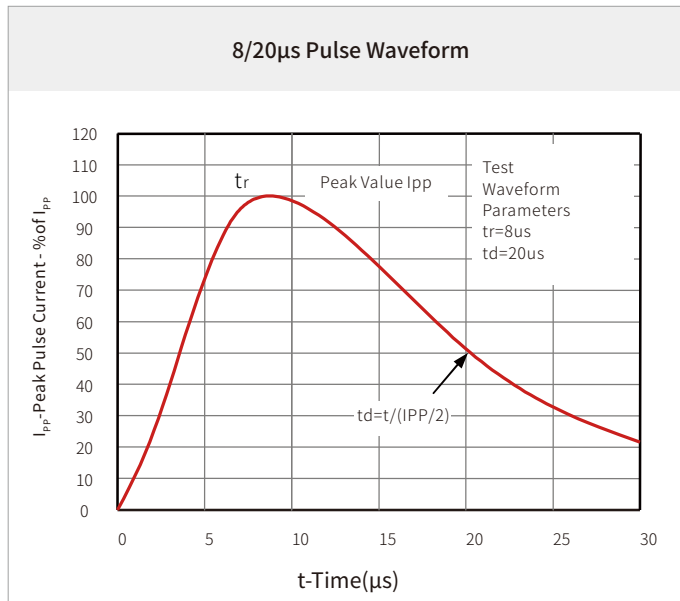
THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
P_{pp}	Peak Pulse Power (tp=8/20μs waveform)	5200	Watts
T_J	Operating Temperature Range	-55 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

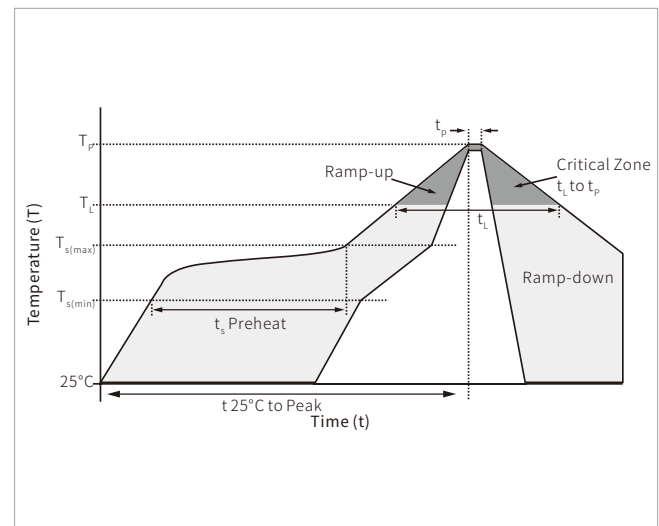
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				18	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1mA$	19		22.5	V
I_R	Reverse Leakage Current	$V_{RWM}=18V$			1	μA
V_C	Clamping Voltage	$I_{pp}=150A, tp=8/20\mu s$			35	V
I_{PP}	Peak Pulse Current	tp=8/20μs			150	A
C_J	Off State Junction Capacitance	$V_R=0V, f=1MHz$		1000		pF

CHARACTERISTIC CURVES

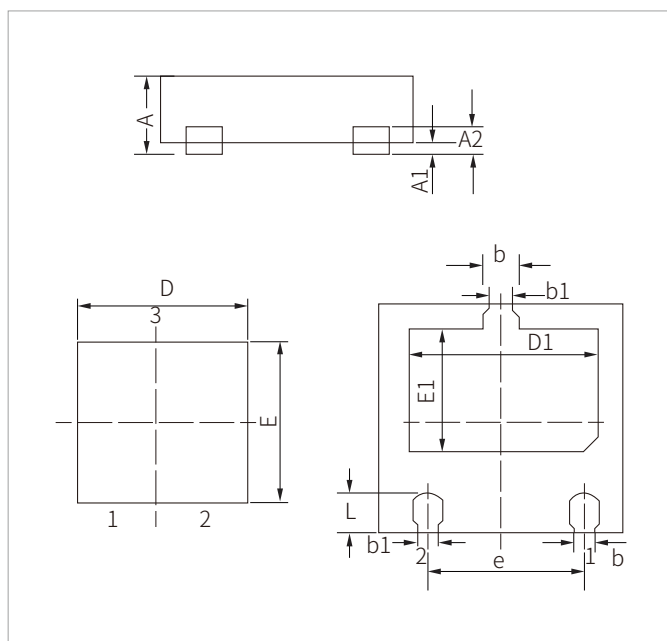


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

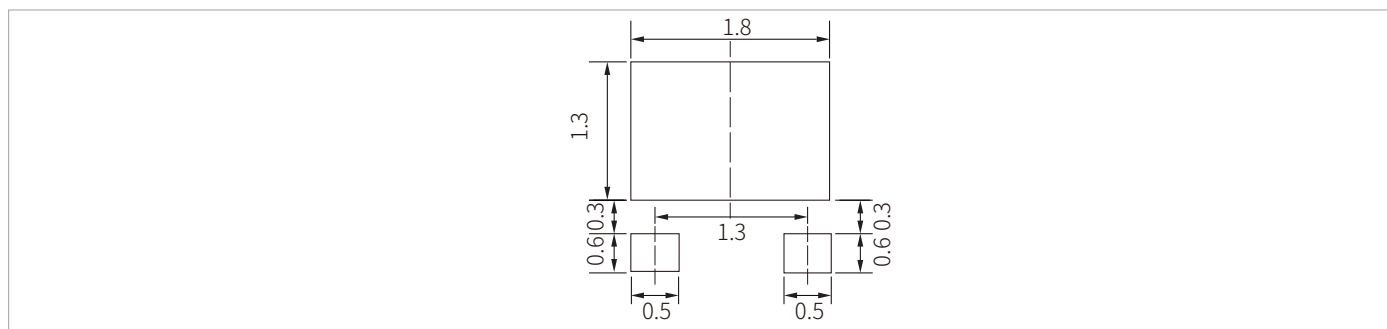


DFN2020-3L PACKAGE INFORMATION



Ref.	Millimeters		
	Min.	Typ.	Max.
A	0.45	0.55	0.65
A1	-	0.00	0.05
A2	0.152BSC		
D	1.80	2.00	2.20
E	1.80	2.00	2.20
b	0.15	0.20	0.25
b1	0.25	0.30	0.35
D1	1.45	1.50	1.55
E1	1.00	1.05	1.10
e	1.30BSC		
L	0.35	0.40	0.45

RECOMMENDED PAD LAYOUT DIMENSIONS



ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
TPSE22F500U18A	DFN2020-3L	3000PCS	7"

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