SE22F3P480B4.5A

Electrostatic Discharge Protection Device

FEATURES

- 4800Watts peak pulse power(tp=8/20s)
- Bi-directional configurations
- Solid-state silicon-avalanche technology
- Low leakage current
- Low clamping voltage

APPLICATIONS

- Power Management
- Power Supply Protection
- Computer & Consumer Electronics
- Portable Electronics
- Industrial equipment



DFN2020-3L



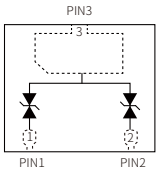
Marking

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

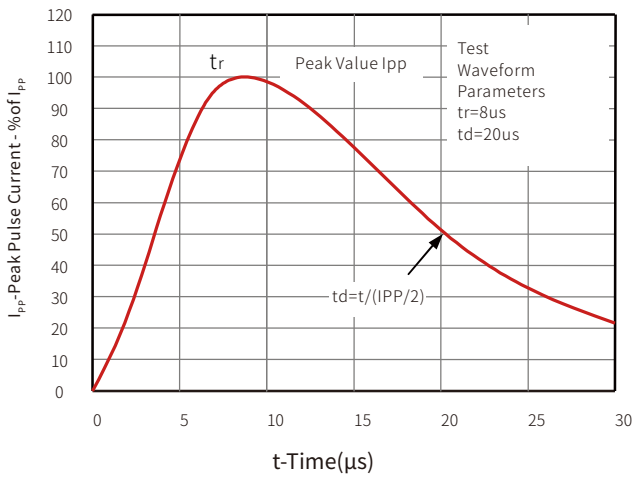
Symbol	Parameter	Value	Unit
P_{pp}	Peak Pulse Power (tp=8/20μs waveform)	4800	Watts
T_J	Operating Temperature Range	-55 ~ +125	°C
T_{STG}	Storage Temperature Range	-55 ~ +125	°C

ELECTRICAL CHARACTERISTICS

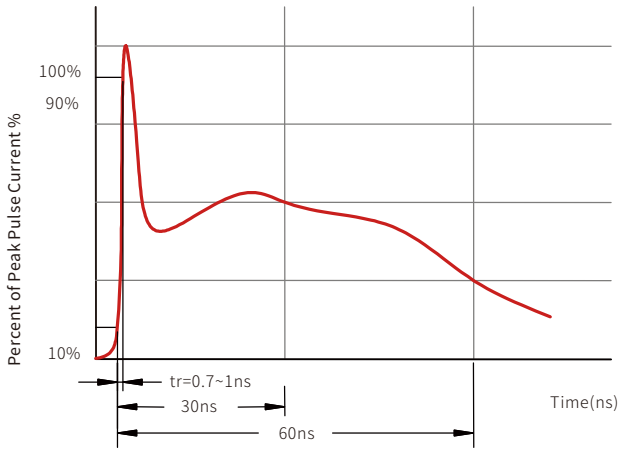
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				4.5	V
V_{BR}	Reverse Breakdown Voltage	I_T=1mA	4.8			V
I_R	Reverse Leakage Current	V_{RWM}=4.5V			0.5	μA
V_C	Clamping Voltage	I_{PP}=320A,tp=8/20μs			15	V
I_{PP}	Peak Pulse Current	tp=8/20μs			320	A
C_J	Off State Junction Capacitance	V_R=0V, f=1MHz Pin1/pin2 to pin3		415	450	pF

CHARACTERISTIC CURVES

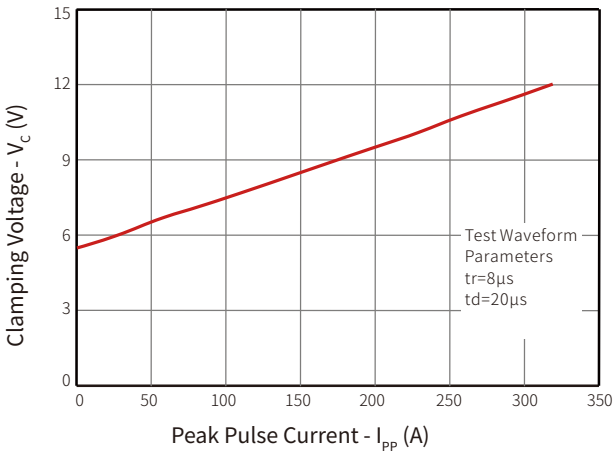
8/20μs Pulse Waveform



ESD Pulse Waveform (according to IEC 61000-4-2)

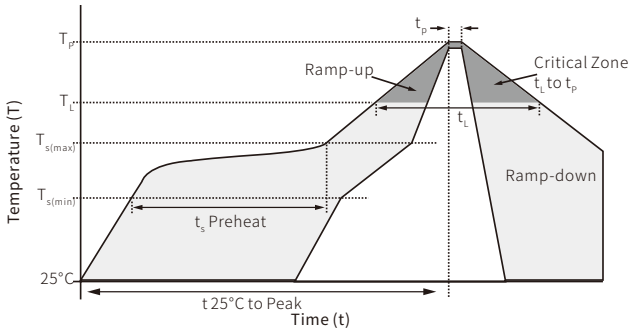


Clamping Voltage vs Peak Pulse Current

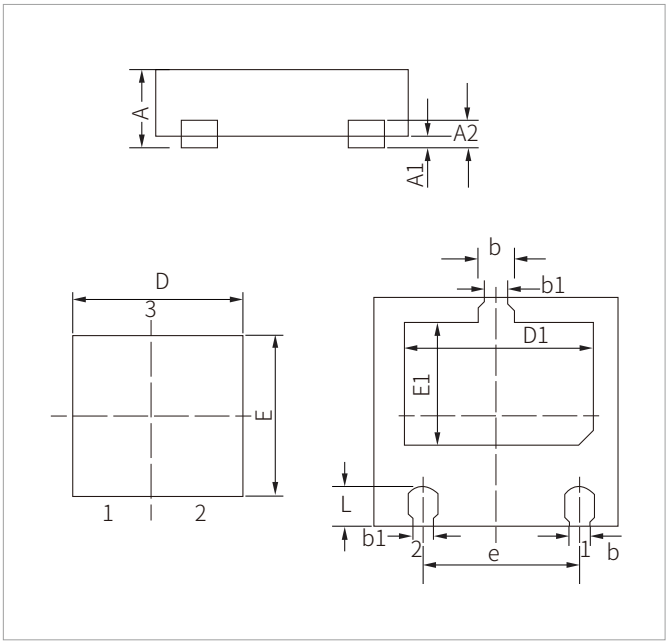


SOLDERING PARAMETERS

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

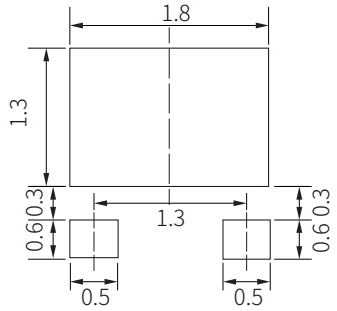


DFN2020-3L PACKAGE INFORMATION



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
SE22F3P480B4.5A	DFN2020-3L	3000PCS	7”

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