SE10P3F20U5.0B

Electrostatic Discharge Protection Device

FEATURES

- 200Watts peak pulse power (tp = 8/20μs)
- Uni-directional configurations
- Solid-state silicon-avalanche technology
- Capacitance: 80pF typical
- Low clamping voltage
- Low leakage current

APPLICATIONS

- Cellular handsets
- Computers and peripherals
- Microprocessors
- Power lines
- Portable Electronics
- Notebooks

DFN1006P3

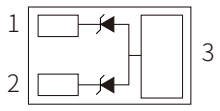
Marking

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

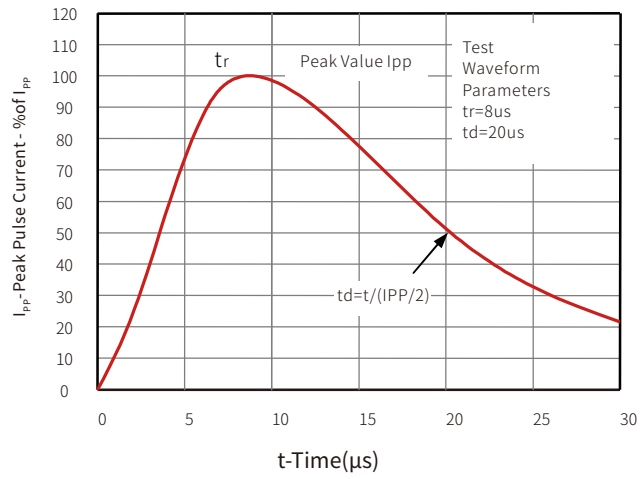
Symbol	Parameter	Value	Unit
P_{pp}	Peak Pulse Power (tp=8/20μs waveform)	200	Watts
T_J	Operating Temperature Range	-55 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

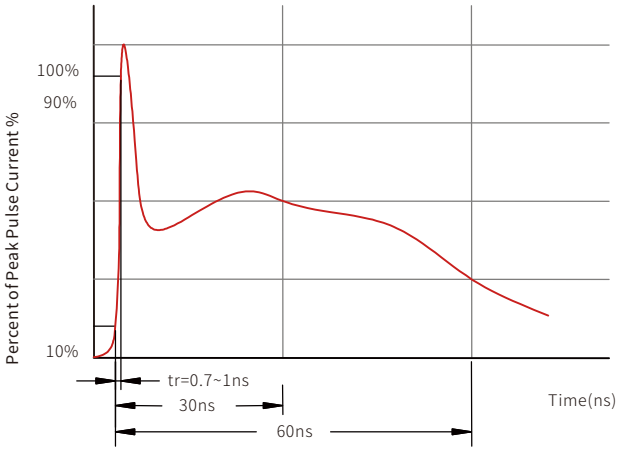
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				5	V
V_{BR}	Reverse Breakdown Voltage	I_T=1mA	6	7.2	8	V
I_R	Reverse Leakage Current	V_{RWM}=5V			1	μA
V_F	Forward Voltage	I_F=10mA			1.2	V
V_C	Clamping Voltage	I_{PP}=11A,tp=8/20μs		12	18	V
I_{PP}	Peak Pulse Current	tp=8/20μs			11	A
C_J	Junction Capacitance	V_{DC}=0V, f=1MHz		80	100	pF

CHARACTERISTIC CURVES

8/20μs Pulse Waveform

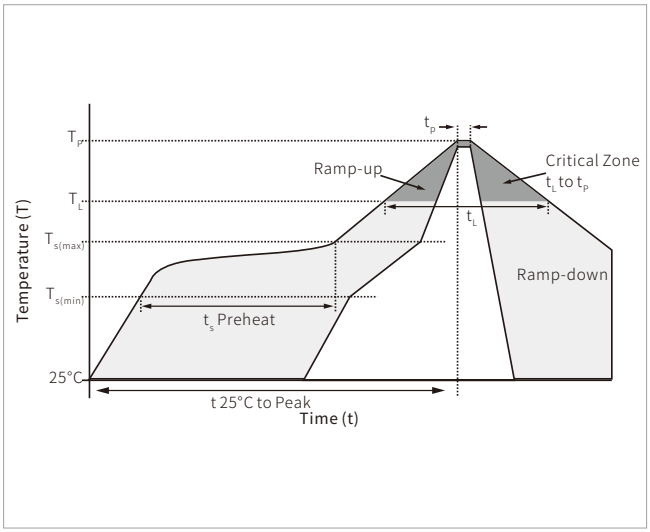


ESD Pulse Waveform (according to IEC 61000-4-2)

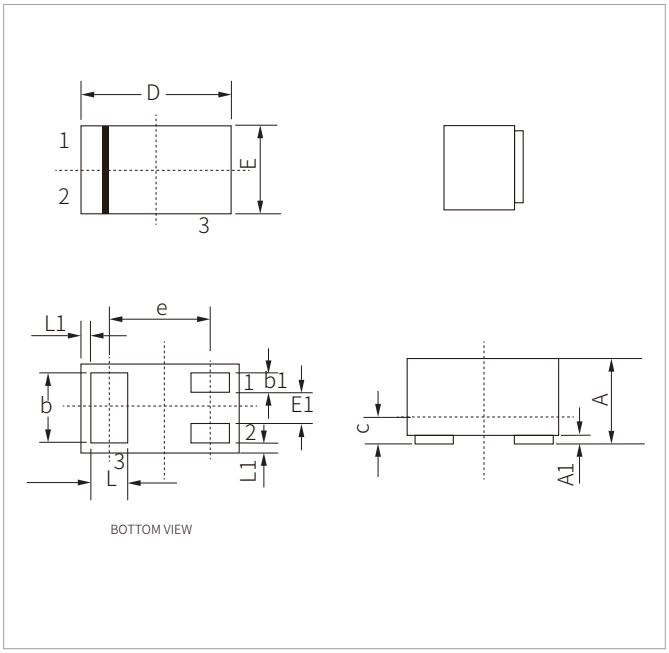


SOLDERING PARAMETERS

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

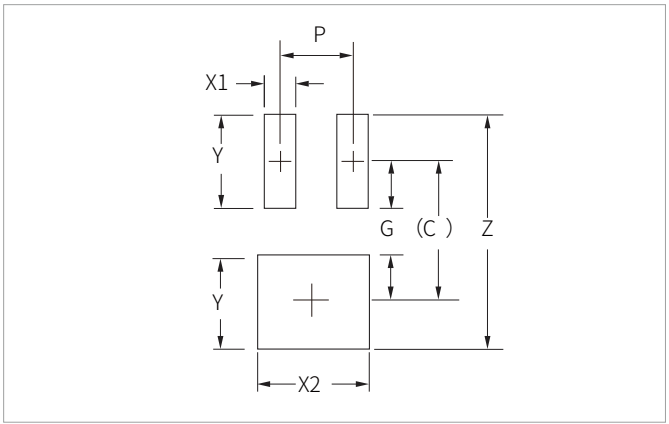


DFN1006P3 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.35	0.50	0.014	0.020
A1	0	0.05	0	0.002
b	0.45	0.55	0.018	0.022
b1	0.10	0.20	0.004	0.008
c	0.12	0.18	0.005	0.007
D	0.95	1.05	0.037	0.041
e	0.65BSC		0.026BSC	
E	0.55	0.70	0.022	0.027
E1	0.20	0.30	0.008	0.014
L	0.20	0.30	0.008	0.012
L1	0.05REF		0.002REF	

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
C	(0.85)	(0.033)
P	0.40	0.016
G	0.30	0.012
X1	0.20	0.008
X2	0.60	0.024
Y	0.55	0.022
Z	1.40	0.055

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE10P3F20U5.0B	DFN1006P3	10000PCS	7”

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