

FEATURES

- | 180W Peak Pulse Power per Line (tp=8/20μs)
- | Protects one I/O or power Line
- | Low Clamping Voltage
- | Working Voltages : 5.0V
- | Low leakage current
- | Meet AEC-Q101 Requirements

APPLICATIONS

- | Microprocessor based equipment
- | Personal Digital Assistants(PDA' s)
- | Notebooks,Desktops,and Servers
- | Portable Instrumentation
- | Networking



SOD-323



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

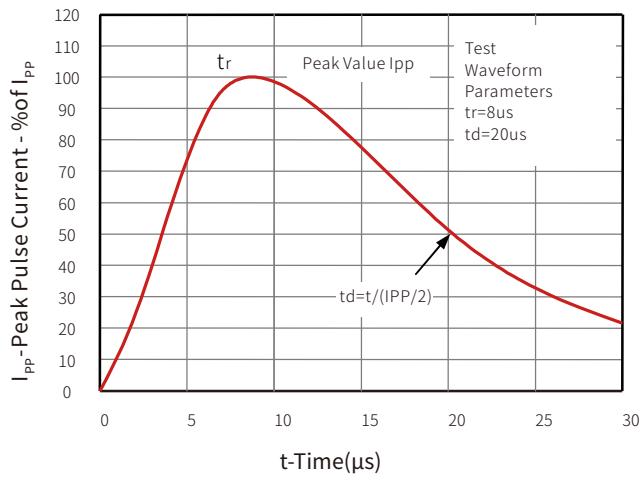
Symbol	Parameter	Value	Unit
P_{PP}	Peak Pulse Power (tp=8/20μs waveform)	180	Watts
T_J	Operating Temperature Range	-55 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +125	°C

ELECTRICAL CHARACTERISTICS

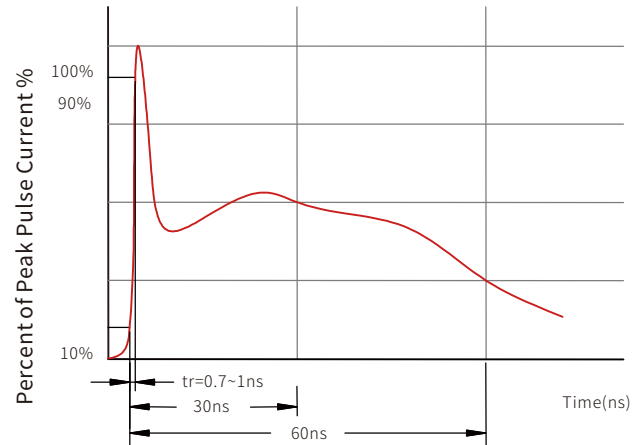
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				5	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1mA$	8			V
I_R	Reverse Leakage Current	$V_{RWM}=5V$			0.5	μA
V_H	Holding Voltage	$I_H=60mA$	2.0			V
V_C	Clamping Voltage	$I_{PP}=1A, tp=8/20\mu s$			4.5	V
V_C	Clamping Voltage	$I_{PP}=5A, tp=8/20\mu s$			6	V
V_C	Clamping Voltage	$I_{PP}=20A, tp=8/20\mu s$			9	V
I_{PP}	Peak Pulse Current	tp=8/20μs			20	A
C_J	Off State Junction Capacitance	$V_R=0V, f=1MHz$		3		pF

CHARACTERISTIC CURVES

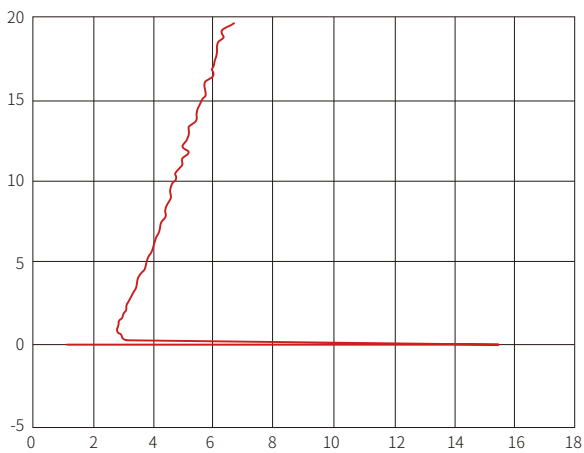
8/20 μ s Pulse Waveform



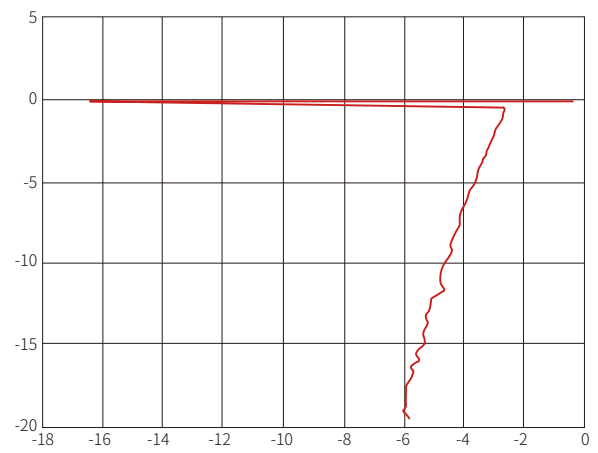
ESD Pulse Waveform (according to IEC 61000-4-2)



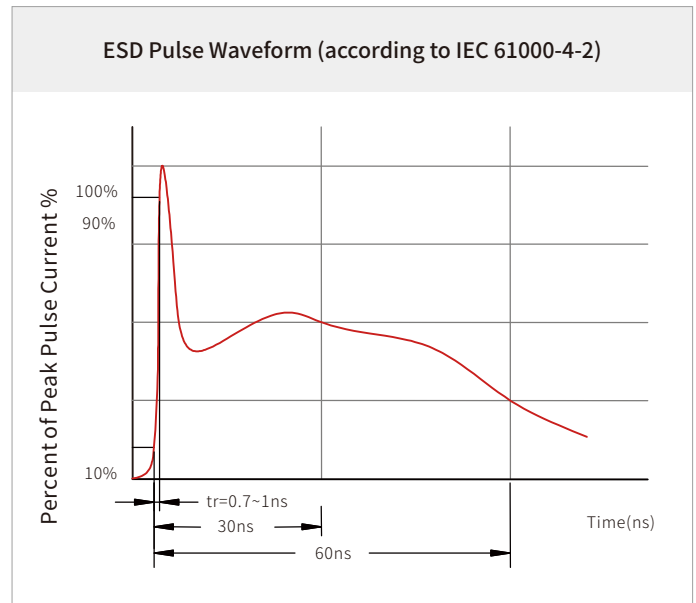
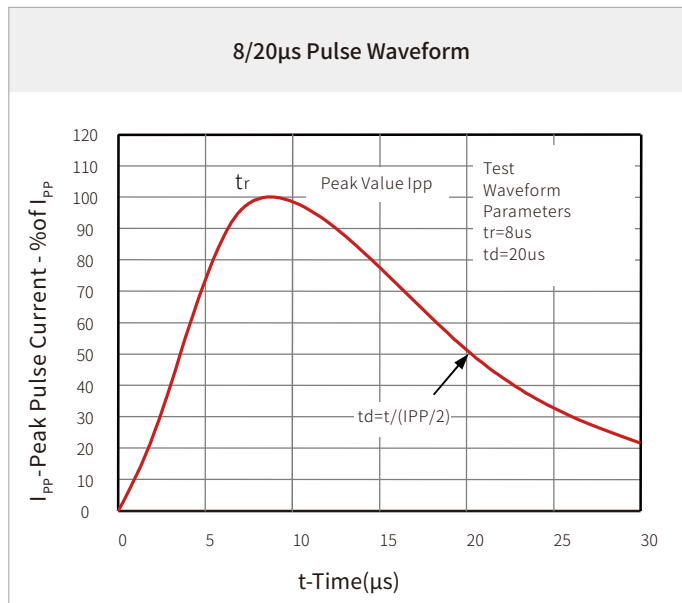
TLP Positive Current (A)



TLP Negative Current (A)

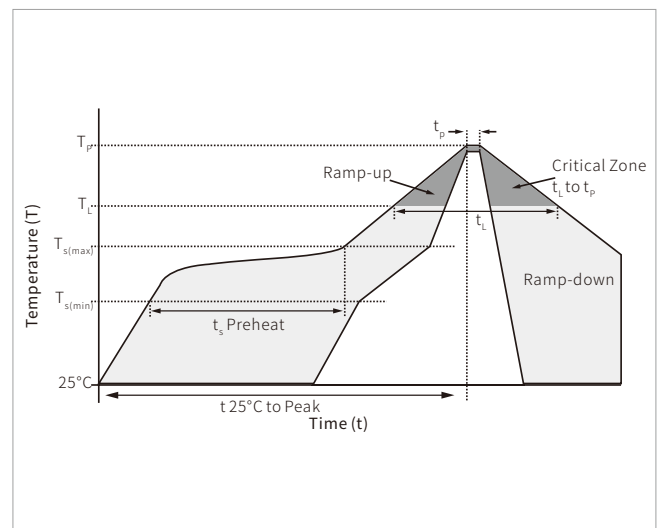


CHARACTERISTIC CURVES

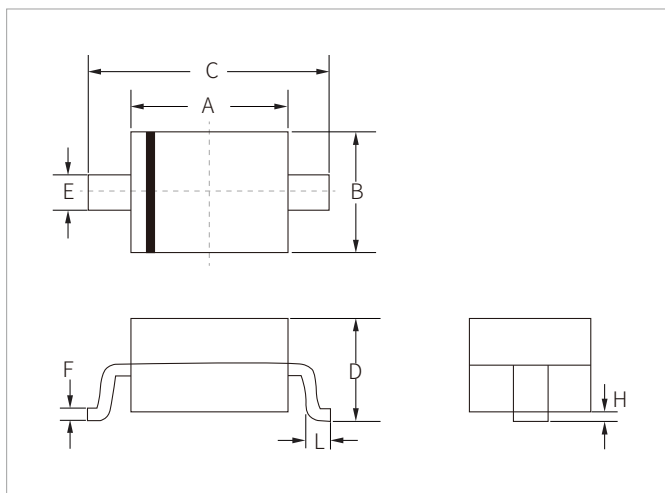


SOLDERING PARAMETERS

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

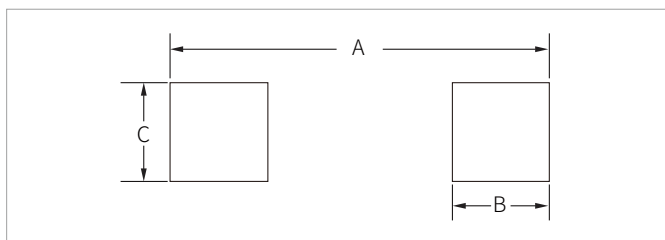


SOD-323 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.35	2.75	0.093	0.108
D	0.80	1.10	0.031	0.043
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	0.40	0.008	0.016

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.87	3.12	0.113	0.123
B	0.66	0.91	0.026	0.036
C	0.66	0.91	0.026	0.036

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
TPSE3D20U5.0LA-SP	SOD-323	3000PCS	7"

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By QR Code

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