

FEATURES

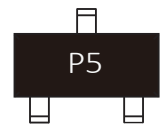
- | 125Watts peak pulse power (tp = 8/20μs)
- | Protects Two Lines
- | Operating Voltage: 5.0V
- | Low clamping voltage
- | Low leakage current
- | Meet AEC-Q101 Requirements

APPLICATIONS

- | Notebooks,Desktops,Servers and
- | Video Graphics Cards
- | USB Power & Data Line Protection
- | Monitors and Flat Panel Displays
- | I²C BUS Protection
- | Portable Instrumentation
- | Set-Top Box



SOT-523



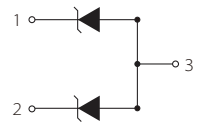
Marking

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

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



Schematic Symbol

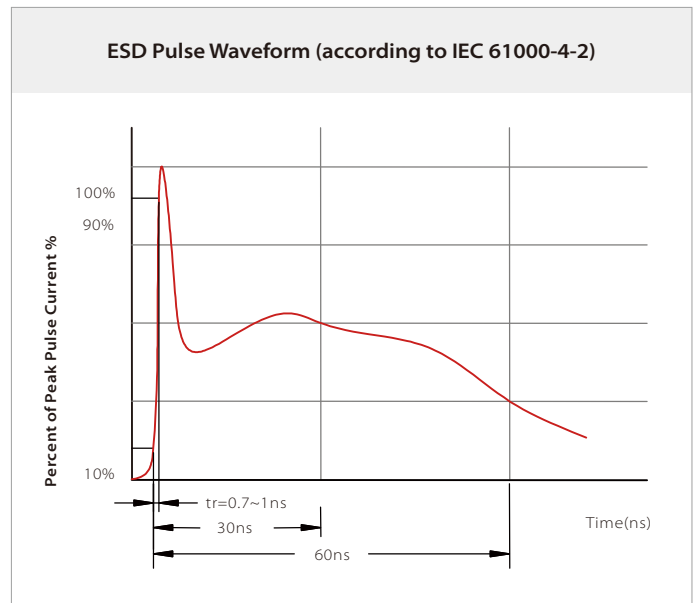
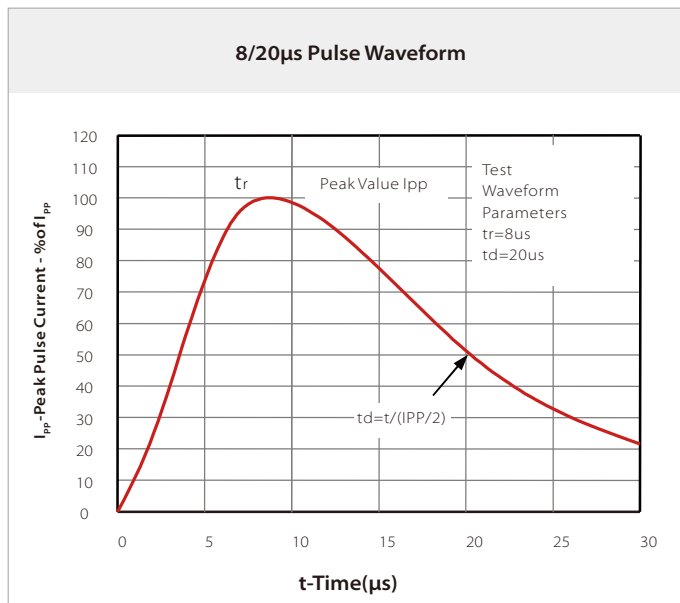
THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
P _{PP}	Peak Pulse Power (tp=8/20μs waveform)	125	Watts
T _J	Operating Temperature Range	-55 to +150	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

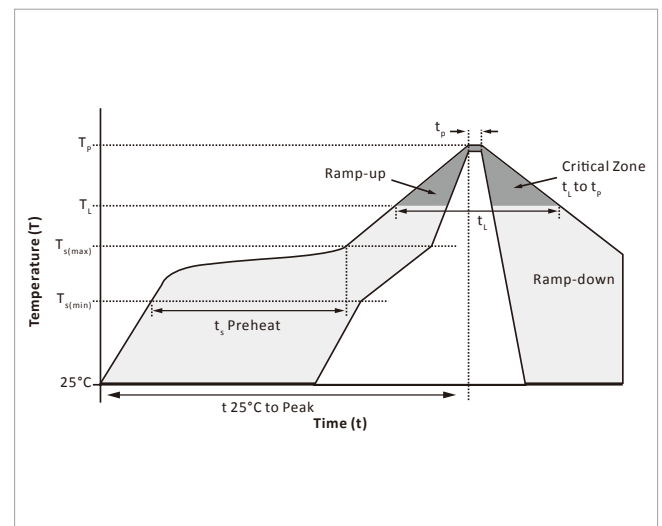
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V _{RWM}	Reverse Stand-off Voltage				5	V
V _{BR}	Reverse Breakdown Voltage	I _T =1 mA	6			V
I _R	Reverse Leakage Current	V _{RWM} =5V			1	μA
V _C	Clamping Voltage (Tp=8/20us)	I _{pp} =1A, tp=8/20us			15	V
V _C	Clamping Voltage (Tp=8/20us)	I _{pp} =4A, tp=8/20us			25	V
I _{pp}	Peak Pulse Current (Tp=8/20us)	tp=8/20us			4	A
C _J	Off State Junction Capacitance	V _R =0V, f=1MHz			1	pF

CHARACTERISTIC CURVES

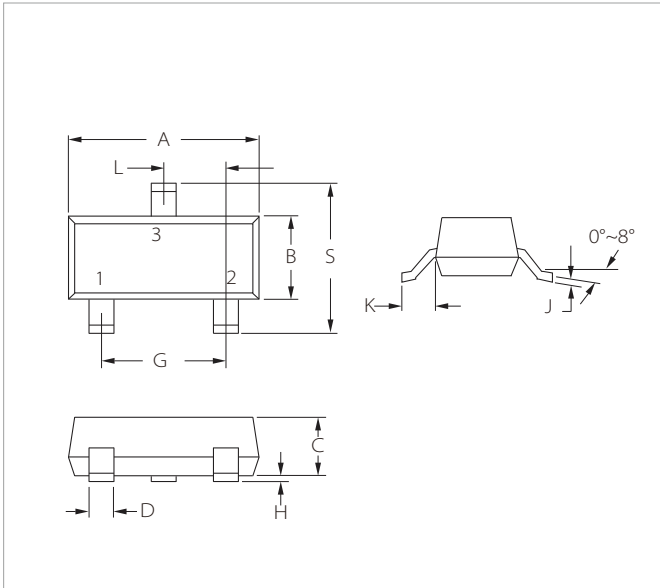


SOLDERING PARAMETERS

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_p)	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

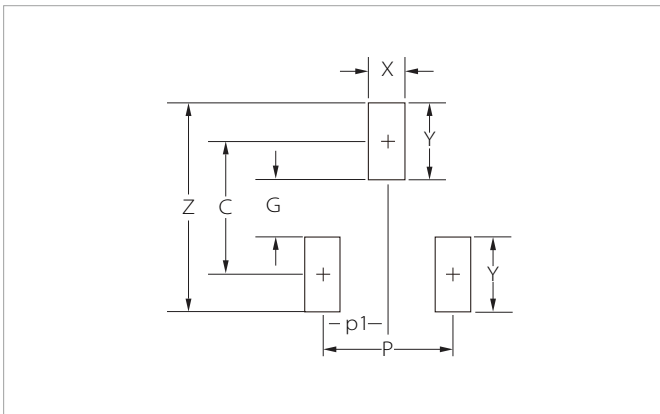


SOT-523 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.70	0.059	0.067
B	0.75	0.85	0.029	0.033
C	0.60	0.80	0.023	0.031
D	0.15	0.30	0.005	0.012
G	1.00BSC		0.039BSC	
H	0.00	0.10	0.000	0.004
J	0.10	0.20	0.004	0.008
K	(0.22)		(0.009)	
L	0.50BSC		0.020BSC	
S	1.45	1.75	0.057	0.069

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
C	(1.40)	(0.055)
P	1.00	0.039
p1	0.50	0.020
G	0.60	0.024
X	0.40	0.016
Y	0.80	0.031
Z	2.20	0.087

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
TPSE35T12U5.0MB	SOT-523	3000PCS	7"

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