

FEATURES

- | 500W Peak Pulse Power per Line (tp=8/20μs)
- | Protects two Bidirectional lines
- | Low clamping voltage
- | Working voltages : 5.0V
- | Low Leakage current
- | Meet AEC-Q101 Requirements

APPLICATIONS

- | Cellular Phone Handsets and Accessories
- | Microprocessor based equipment
- | Personal Digital Assistants (PDA' s)
- | Notebooks,Desktops,and Servers
- | Portable Inserumentation
- | Networking and Telecom
- | Servers and Parallel Ports
- | Peripherals



SOT-23



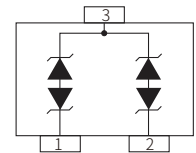
Marking

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

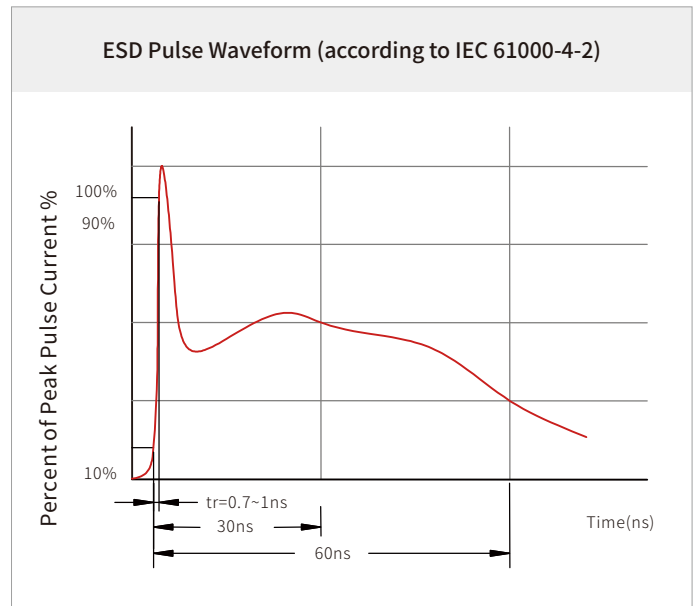
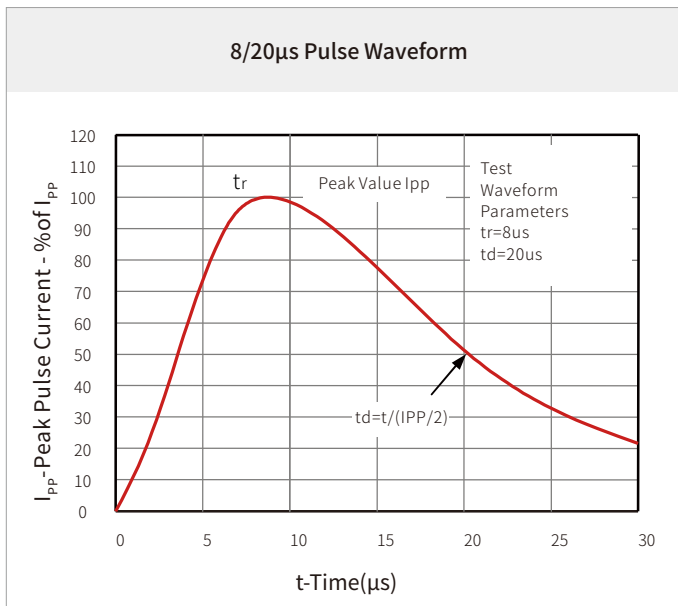
THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
P_{PP}	Peak Pulse Power (tp=8/20μs waveform)	500	Watts
T_J	Operating Temperature Range	-55 to +150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

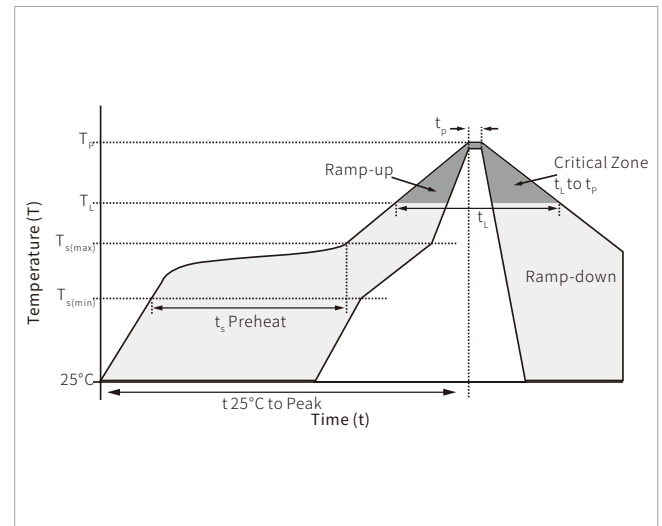
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				5	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1mA$	5.6			V
I_R	Reverse Leakage Current	$V_{RWM}=5V$			1.0	μA
V_C	Clamping Voltage	$I_{PP}=1A, tp=8/20\mu s$			9.8	V
V_C	Clamping Voltage	$I_{PP}=23A, tp=8/20\mu s$			22	V
I_{PP}	Peak Pulse Current	tp=8/20μs			23	A
C_J	Off State Junction Capacitance	$V_R=0V, f=1MHz$			65	pF

CHARACTERISTIC CURVES

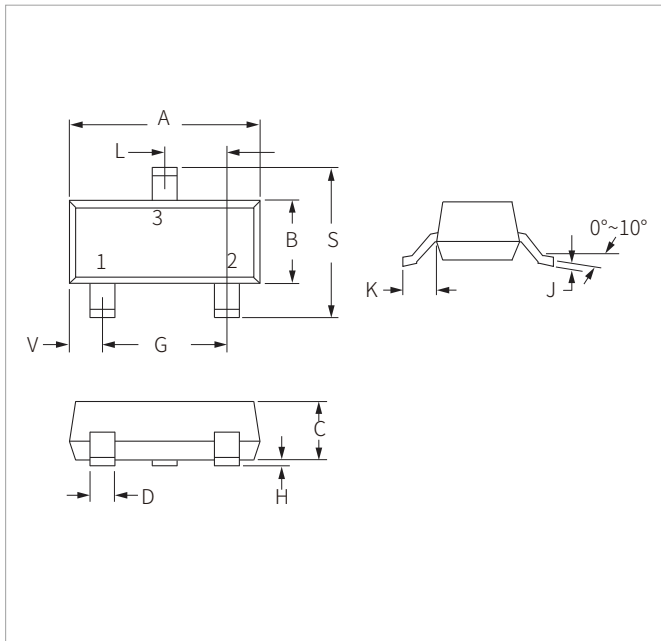


SOLDERING PARAMETERS

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

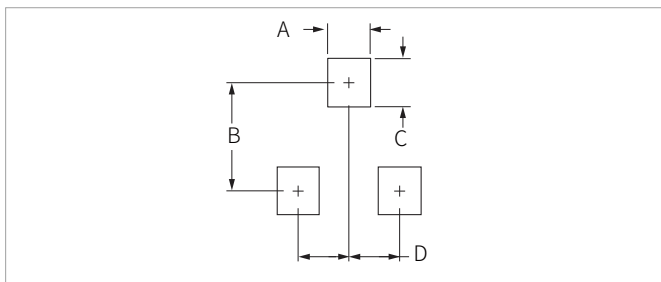


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.90	1.15	0.035	0.045
D	0.37	0.50	0.015	0.020
G	1.75	2.05	0.069	0.081
H	0.01	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	0.35	0.69	0.014	0.029
L	0.89	1.02	0.035	0.040
S	2.10	2.65	0.083	0.104
V	0.45	0.60	0.018	0.024

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
TPSE23T50B5.0B	SOT-23	3000PCS	7"

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