

## FEATURES

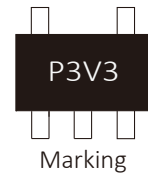
- | 435W Peak Pulse Power per Line (tp=8/20μs)
- | Protects Four I/O Lines
- | Low Clamping Voltage

## APPLICATIONS

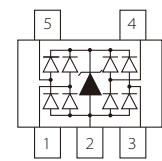
- | Low-voltage interfaces
- | T3/E3
- | 10/100/1000 Ethernet
- | Set-top boxes
- | ISDN interfaces
- | Automobile Applications
- | Customer Premise Equipment
- | Infiniband Transceiver Protection



SOT-23-5



Marking



Schematic Symbol

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

## APPROVALS

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

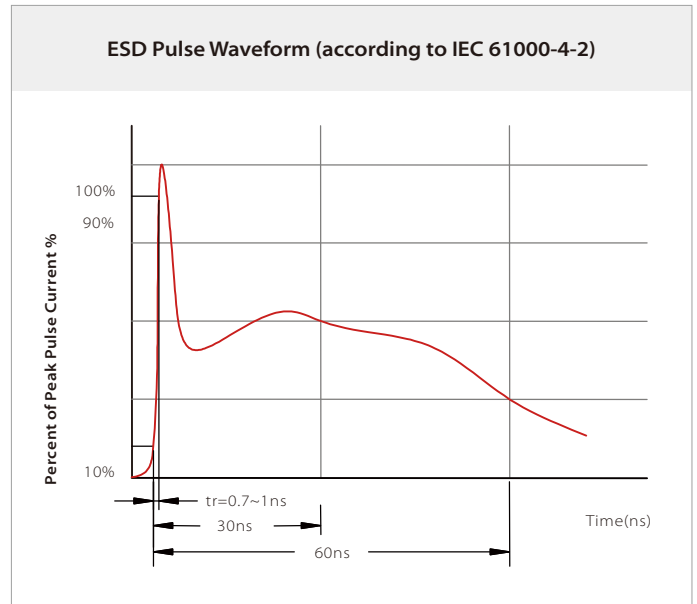
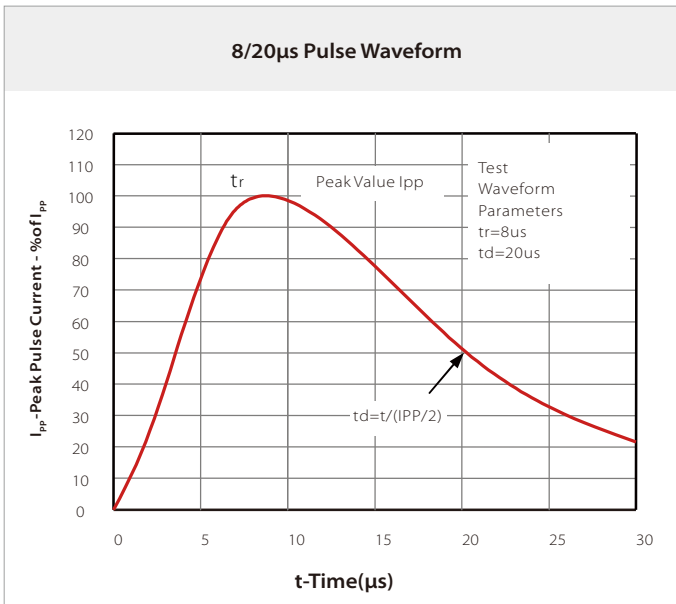
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	435	Watts
$T_J$	Operating Temperature Range	-40 to +125	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

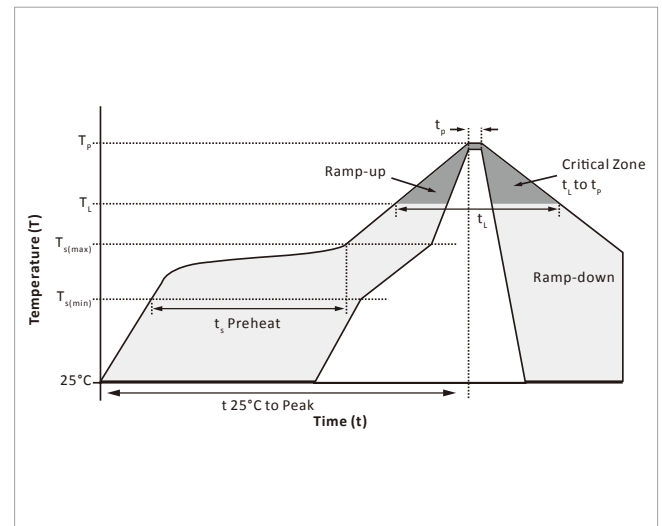
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				3.3	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1\text{mA}$	4			V
$I_R$	Reverse Leakage Current	$V_{RWM}=3.3\text{V}$			1	μA
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=1\text{A}, tp=8/20\text{us}$			5.5	V
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=10\text{A}, tp=8/20\text{us}$			8.2	V
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=30\text{A}, tp=8/20\text{us}$			14.5	V
$I_{pp}$	Peak Pulse Current (Tp=8/20us)	tp=8/20us			30	A
$C_J$	Off State Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$ IO to GND		4		pF
$C_J$	Off State Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$ IO to IO		2		pF

## CHARACTERISTIC CURVES

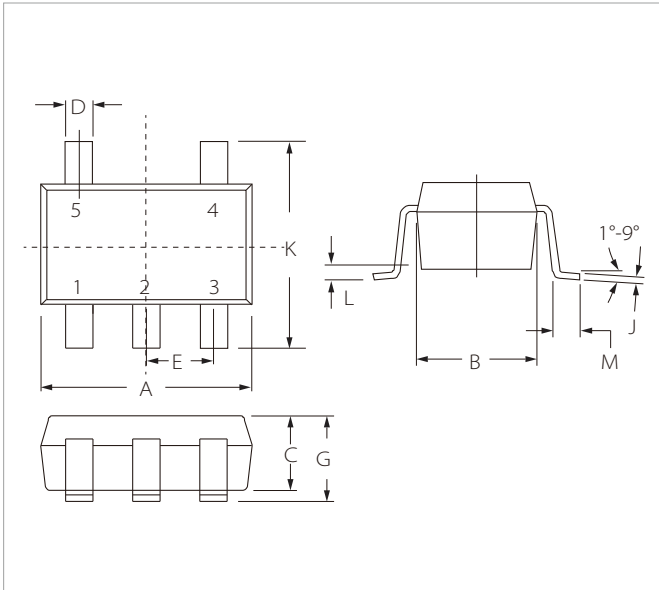


## SOLDERING PARAMETERS

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

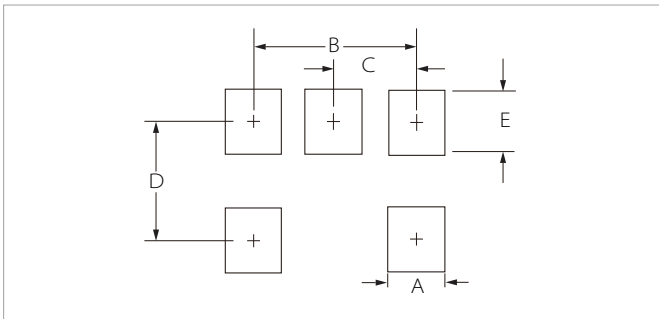


## SOT-23-5 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.10	0.110	0.122
B	1.50	1.80	0.059	0.071
C	0.90	1.30	0.036	0.051
D	0.25	0.50	0.010	0.020
E	0.95(Typ)		0.037(Typ)	
G	0.90	1.40	0.036	0.055
J	0.08	0.25	0.003	0.010
K	2.60	3.00	0.102	0.118
L	0.00	0.10	0.00	0.004
M	0.37	2.64	0.014	-

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
	Nominal	Nominal
A	0.70	0.028
B	1.90	0.074
C	0.95	0.037
D	2.40	0.094
E	1.00	0.039

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE25T40U3.3MD	SOT-23-5	3000PCS	7"

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