

## FEATURES

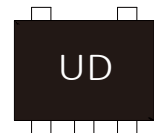
- | 56 Watts Peak Pulse Power per Line (tp=8/20μs)
- | Protects Two I/O Lines and One Vcc
- | Low Clamping Voltage
- | Working voltages : 5 V
- | Low leakage current

## APPLICATIONS

- | USB Port Protection
- | HDMI/DVI Port Protection
- | Digital Sensor Input Protection
- | Industrial Controls
- | LVDS Protection
- | Automotive Applications



SOT-553



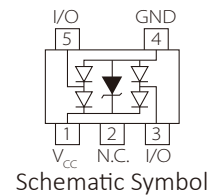
Marking

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±20kV (air), ±15kV (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 |



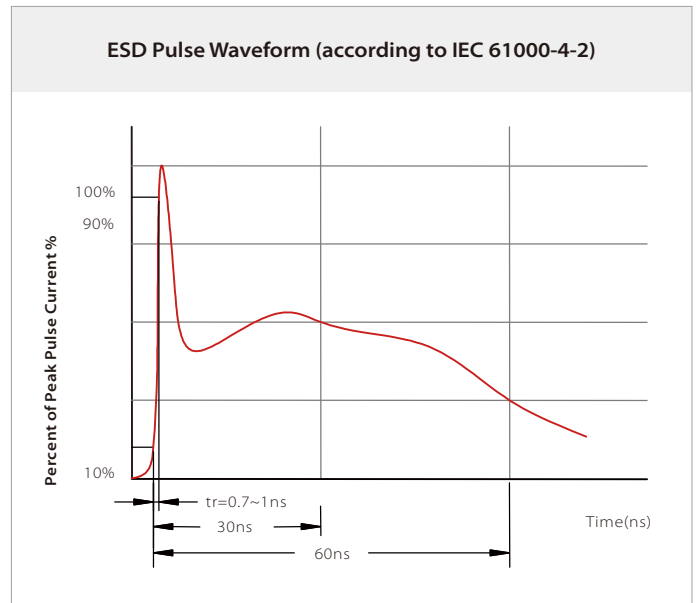
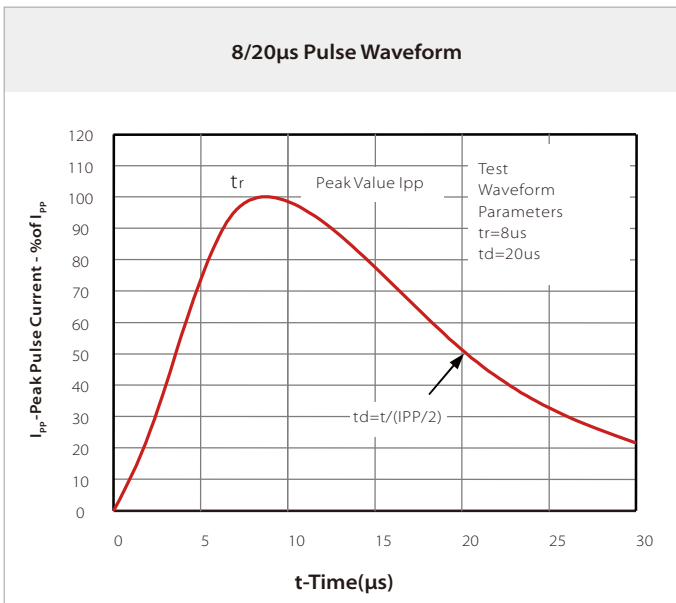
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	56	Watts
$T_J$	Operating Temperature Range	-55 to +150	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

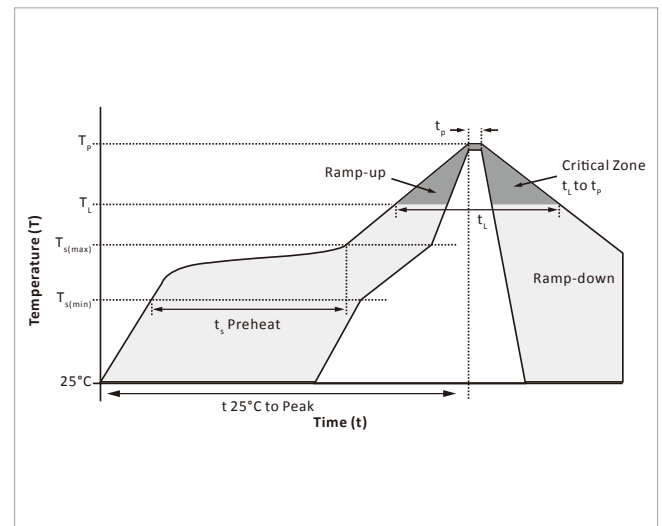
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				5	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1\text{mA}$	6			V
$I_R$	Reverse Leakage Current	$V_{RWM}=5\text{V}$			1	μA
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=1\text{A}, tp=8/20\text{us}$			9.8	V
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=3\text{A}, tp=8/20\text{us}$			14	V
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=3.5\text{A}, tp=8/20\text{us}$			16	V
$I_{pp}$	Peak Pulse Current (Tp=8/20us)	tp=8/20us			3.5	A
$C_J$	Off State Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$		0.9		pF

## CHARACTERISTIC CURVES

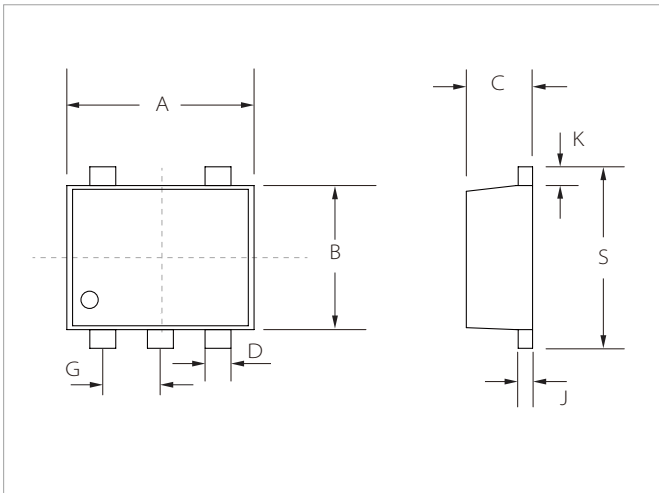


## SOLDERING PARAMETERS

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

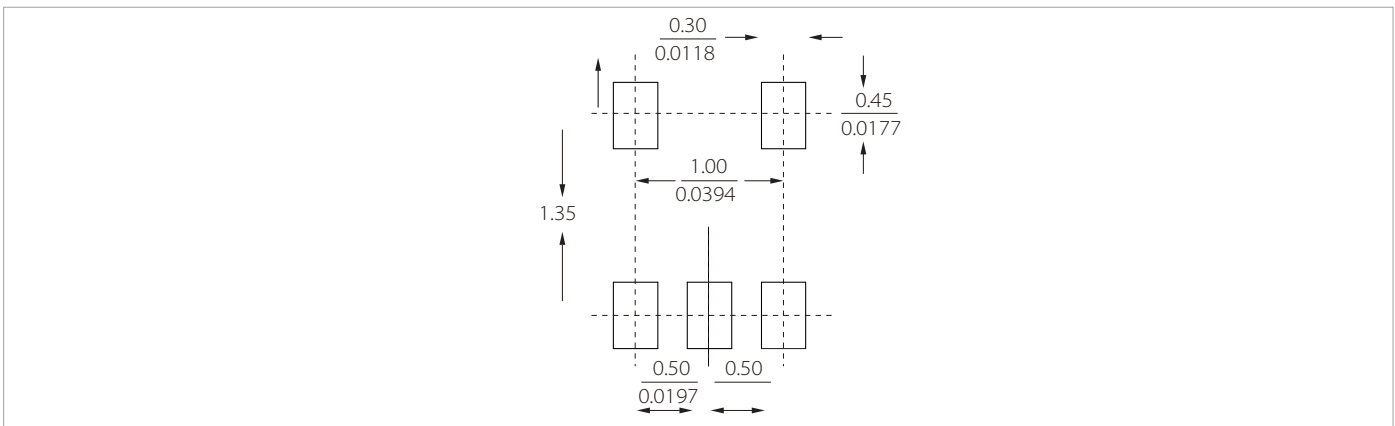


## SOT-553 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.70	0.059	0.067
B	1.10	1.30	0.043	0.051
C	0.50	0.60	0.020	0.024
D	0.17	0.27	0.007	0.011
G	0.50BSC		0.020BSC	
J	0.08	0.18	0.003	0.007
K	0.10	0.30	0.004	0.012
S	1.50	1.70	0.059	0.067

## RECOMMENDED PAD LAYOUT DIMENSIONS



## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE55T10U5.0MC	SOT-553	3000PCS	7"

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