

## FEATURES

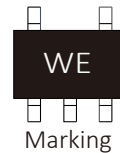
- | Protects four I/O lines
- | Low capacitance
- | Working voltages: 5V
- | Low leakage current
- | Low clamping voltage
- | Low capacitance for high-speed interfaces

## APPLICATIONS

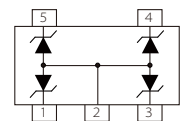
- | High Definition Multi-Media Interface (HDMI)
- | Digital Visual Interface (DVI)
- | Dual USB port
- | IEEE 1394 Firewire Ports
- | Notebooks & Handhelds
- | Projection TV & Monitors
- | Set-top box
- | Flat Panel Displays



SOT-353



Marking



Schematic Symbol

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±25kV (air), ±20kV (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

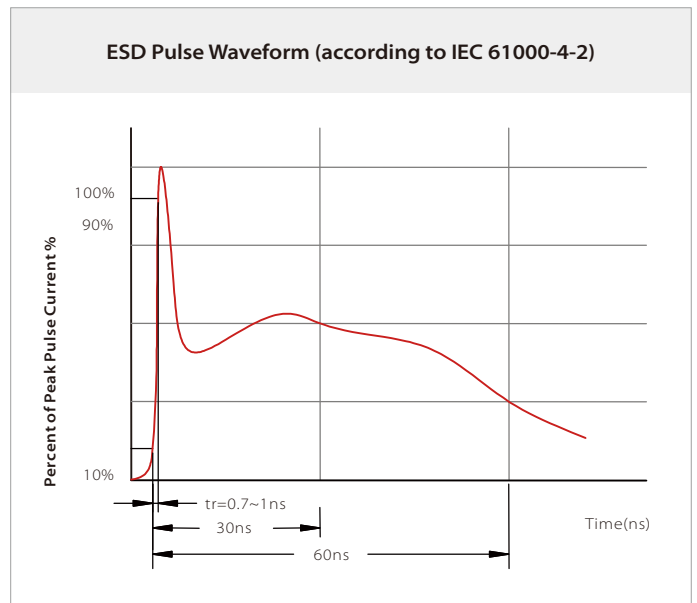
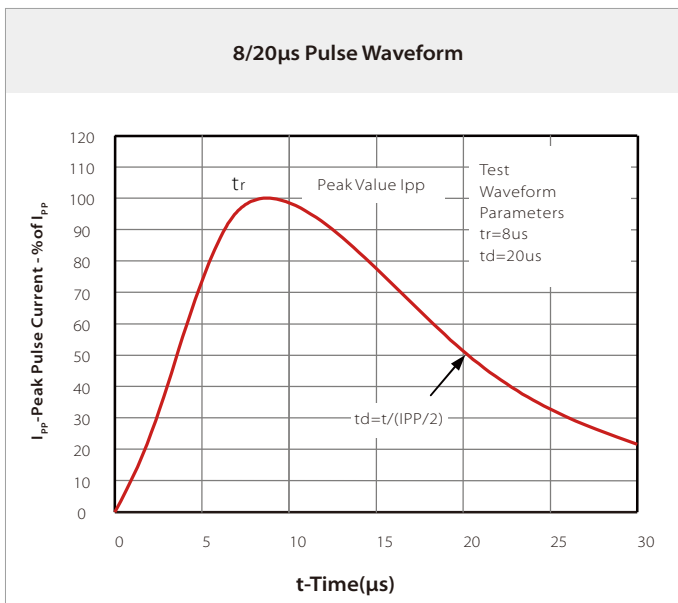
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	60	Watts
$T_J$	Operating Temperature Range	-55 to +150	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C
$T_L$	Lead Soldering Temperature	260(10sec.)	°C

## ELECTRICAL CHARACTERISTICS

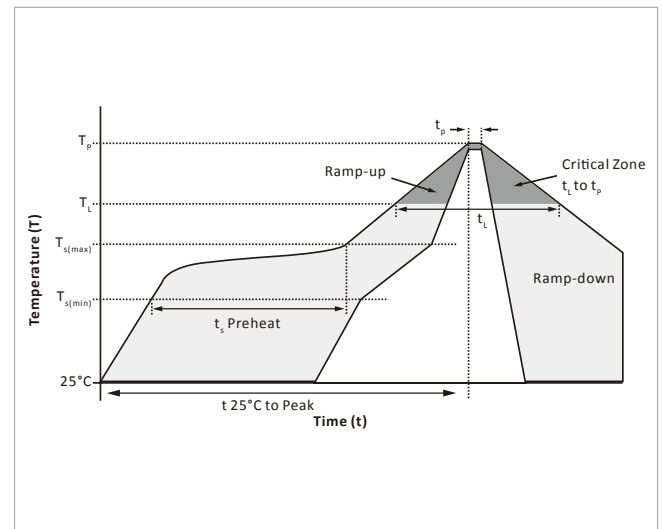
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				5	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1\text{mA}$	6			V
$I_R$	Reverse Leakage Current	$V_{RWM}=5\text{V}$			0.1	$\mu\text{A}$
$V_C$	Clamping Voltage ( $T_p=8/20\mu\text{s}$ )	$I_{pp}=1\text{A}, t_p=8/20\mu\text{s}$			10	V
$V_C$	Clamping Voltage ( $T_p=8/20\mu\text{s}$ )	$I_{pp}=4\text{A}, t_p=8/20\mu\text{s}$			15	V
$I_{PP}$	Peak Pulse Current ( $T_p=8/20\mu\text{s}$ )	$t_p=8/20\mu\text{s}$			4	A
$C_j$	Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$			0.8	pF

## CHARACTERISTIC CURVES

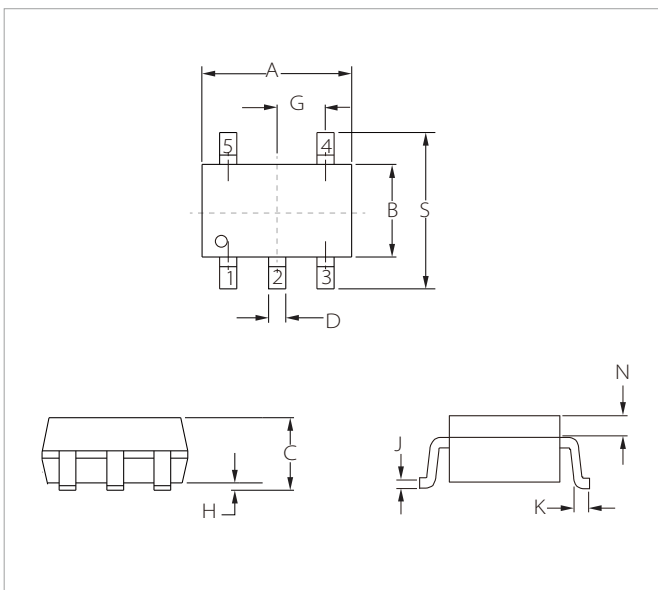


## SOLDERING PARAMETERS

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

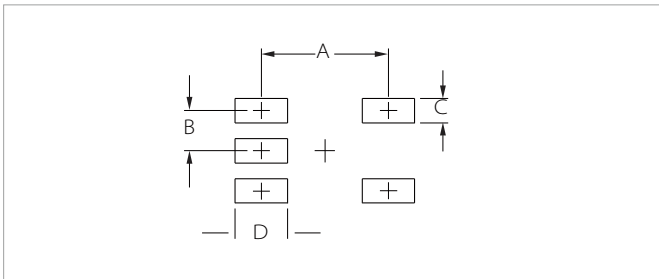


## SOT-353 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.80	2.20	0.071	0.087
B	1.15	1.35	0.045	0.053
C	0.80	1.10	0.031	0.043
D	0.10	0.30	0.004	0.012
G	0.65BSC		0.26BSC	
H	--	0.10	--	0.004
J	0.10	0.25	0.004	0.010
K	0.10	0.30	0.004	0.012
N	0.20REF		0.008REF	
S	2.0	2.2	0.079	0.087

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
	NOR	NOR
A	1.90	0.0748
B	0.65	0.025
C	0.40	0.0157
D	0.50	0.0197

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE53T10U5.0MC	SOT-353	3000PCS	7"

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