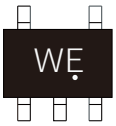
FEATURES

- 60W Peak Pulse Power per Line (tp=8/20μs)
- Protects four I/O lines
- Low capacitance
- Low leakage current
- Low clamping voltage
- Low capacitance for high-speed interfaces

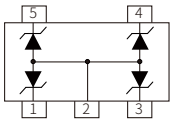
APPLICATIONS

- 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

RoHS	Compliance with 2011/65/EU
HF	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	-40 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

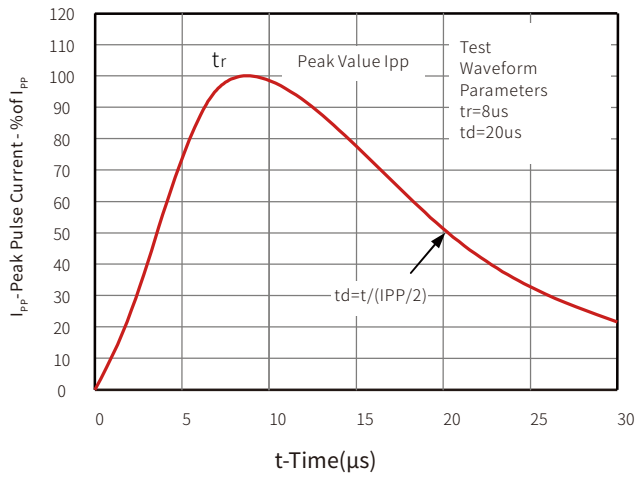
ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	I_T=1mA	6.0			V
I_R	Reverse Leakage Current	V_{RWM}=5V			100	nA
V_C	Clamping Voltage	I_{PP}=1A,tp=8/20μs			10	V
V_C	Clamping Voltage	I_{PP}=4A,tp=8/20μs			15	V
V_F	Forward Voltage	I_F=10mA			1.2	V
I_{PP}	Peak Pulse Current	tp=8/20μs			4	A
C_J	Off State Junction Capacitance	V_R=0V, f=1MHz			0.8	pF

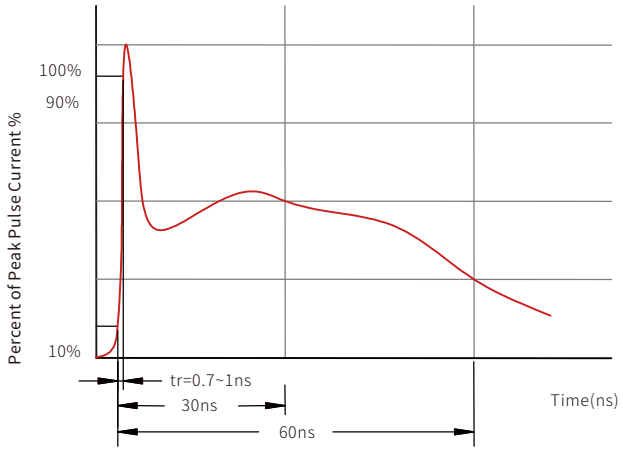
Note: I/O pins are pin 1,3,4,5. Pin 2 is GND

CHARACTERISTIC CURVES

8/20µs Pulse Waveform

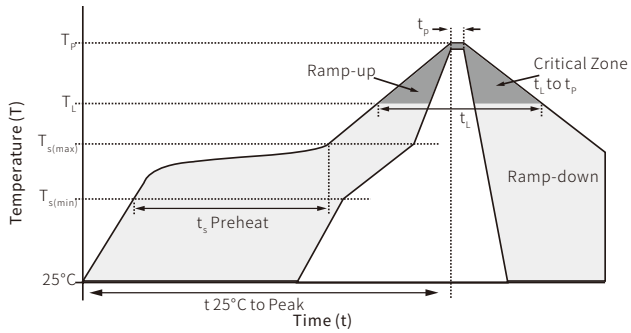


ESD Pulse Waveform (according to IEC 61000-4-2)

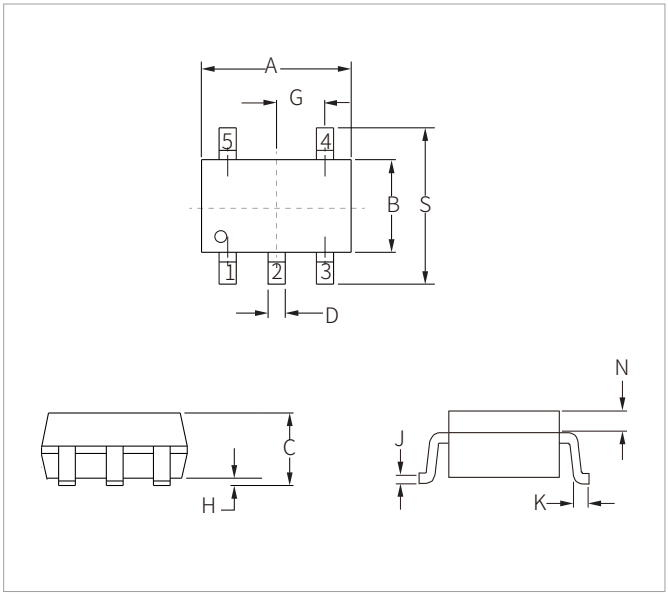


SOLDERING PARAMETERS

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

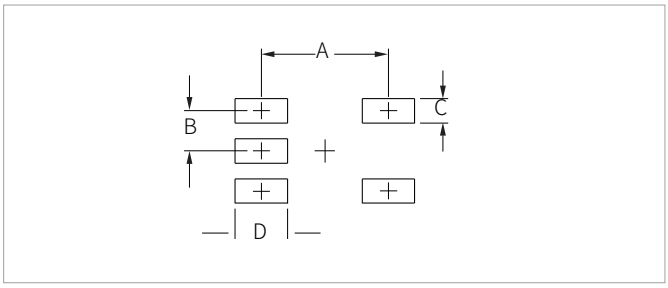


SOT-353 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.80	2.20	0.071	0.087
B	1.10	1.40	0.043	0.055
C	0.80	1.20	0.031	0.047
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
SE53T06U5.0MD	SOT-353	3000PCS	7”

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