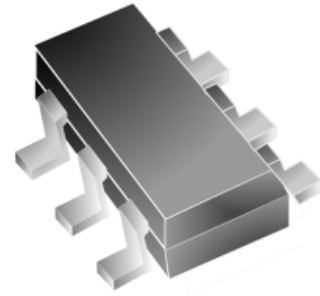




FEATURES:

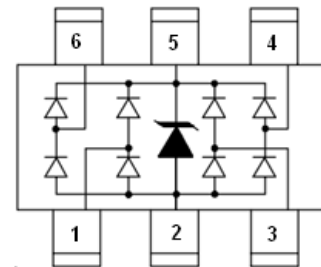
- ✧ 120 Watts peak pulse power per line ($t_P=8/20\mu s$)
- ✧ Protects four I/O lines
- ✧ Low clamping voltage
- ✧ Low operating voltage
- ✧ Low capacitance: 0.3pF typical
- ✧ RoHS compliant



SOT-363

MAIN APPLICATIONS

- ✧ USB 2.0 power and data line protection
- ✧ Digital video interface (DVI)
- ✧ Notebook computers
- ✧ Video /graphics cards
- ✧ Monitors and flat panel displays
- ✧ Notebook and PC computers



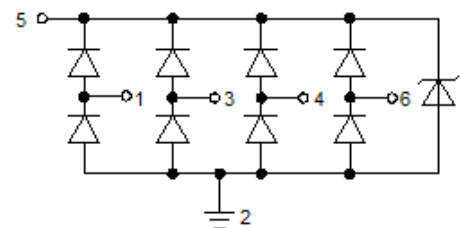
Pin Configuration

PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD) $\pm 20kV$ (air), $\pm 15kV$ (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ IEC61000-4-5 (Lightning) 5A (8/20 μs)

MECHANICAL CHARACTERISTICS

- ✧ JEDEC SOT-363 package
- ✧ Molding compound flammability rating : UL 94V-0
- ✧ Quantity per reel : 3, 000pcs
- ✧ Lead finish : lead free
- ✧ Marking code: 5T



Circuit Diagram

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation at 8/20 μs waveform	P_{PP}	120	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	+/- 20 +/- 15	kV
Lead soldering temperature	T_L	260 (10 sec.)	$^{\circ}\text{C}$
Operating junction temperature range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V_{RWM}				5.0	V
Reverse breakdown voltage	V_{BR}	$I_T=1\text{mA}$	6.0			V
Reverse leakage current	I_R	$V_{RWM}=5\text{V}$			0.5	μA
Forward voltage	V_F	$I_F=10\text{mA}$		0.8	1.0	V
Clamping voltage (I/O pin to Ground)	V_C	$I_{PP}=5\text{A}$, $t_p=8/20\mu\text{s}$		15	18	V
Junction capacitance	C_J	$V_{RWM}=0\text{V}$, $f=1\text{MHz}$ Any I/O pin to Ground		0.6	0.8	pF
		$V_{RWM}=0\text{V}$, $f=1\text{MHz}$ Between I/O pins		0.3		

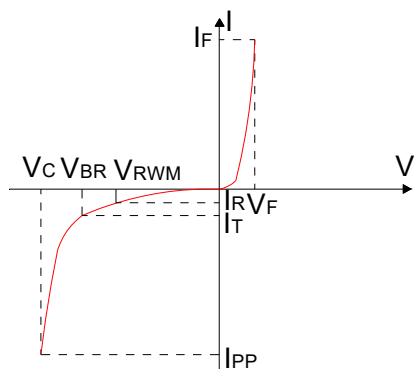
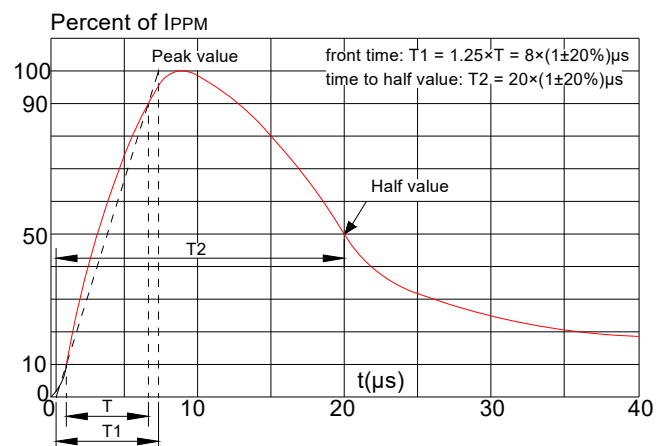
RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)**FIG.1: V- I curve characteristics
(Uni-directional)****FIG.2: Pulse waveform (8/20 μs)**

FIG.3: Pulse derating curve

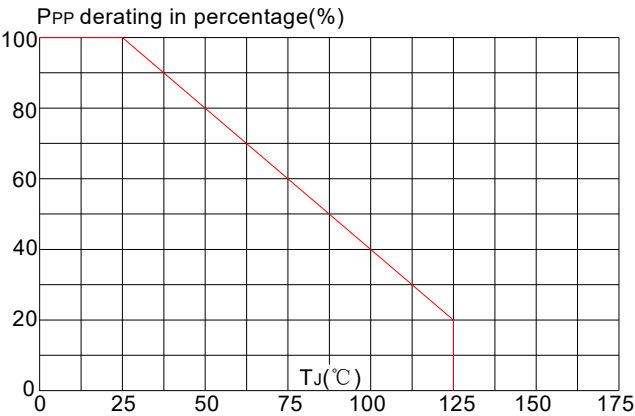
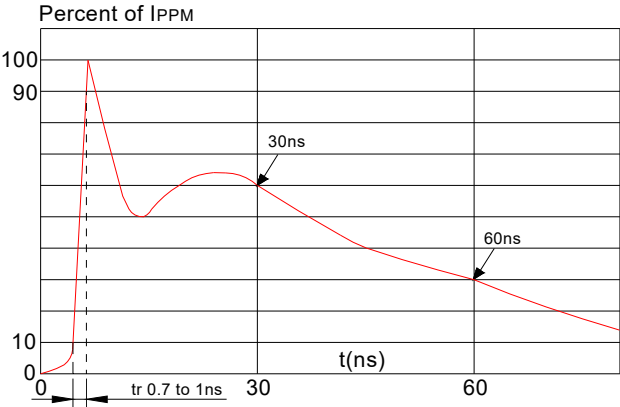
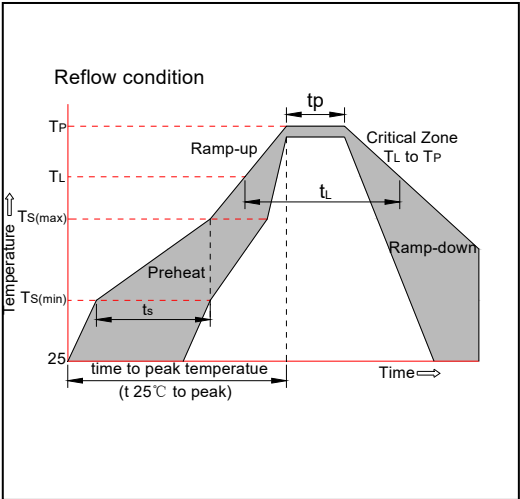


FIG.4: ESD clamping (15kV contact)

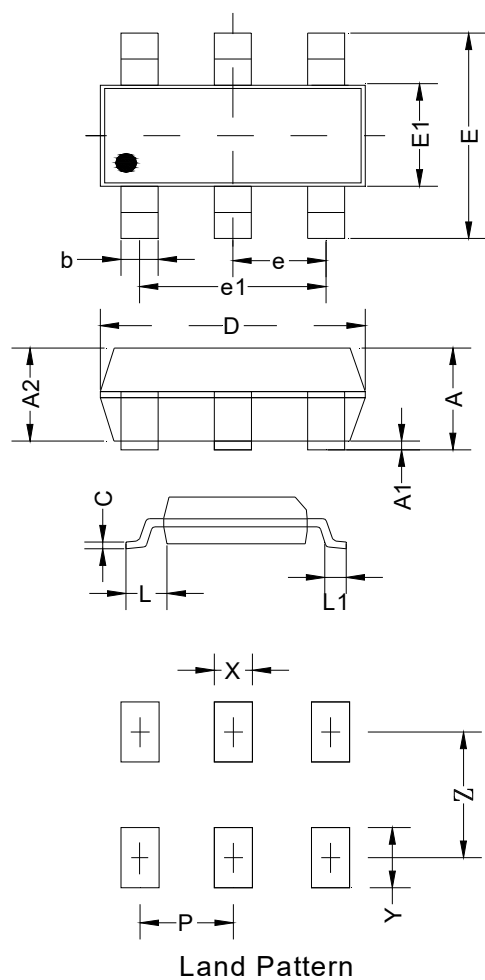


SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+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/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquidus)	+217°C
	-Time(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		20-40secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

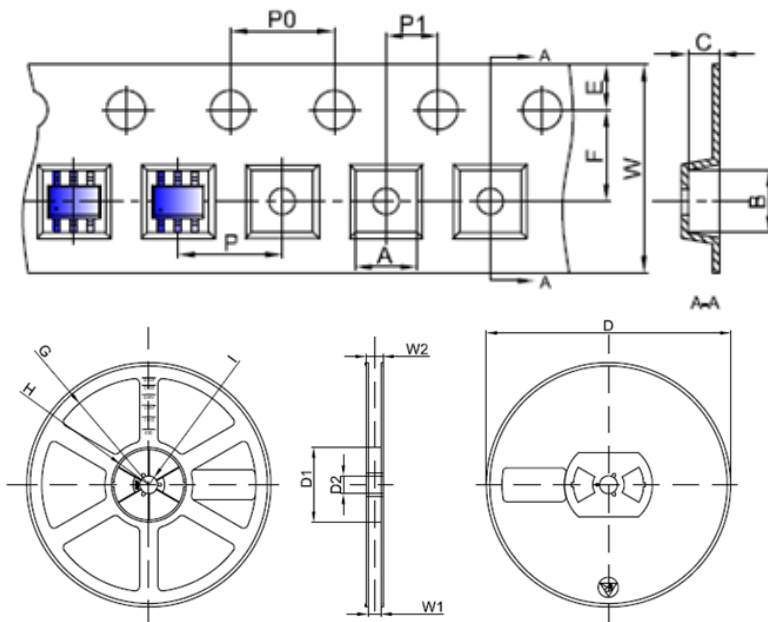


PACKAGE MECHANICAL DATA



Symbol	Millimeters			Inches		
	Min	Typ	Max	Min	Typ	Max
A	0.90	1.00	1.10	0.035	0.039	0.043
A1	0.00	0.03	0.10	0.000	0.001	0.004
A2	0.90	0.95	1.00	0.035	0.037	0.039
D	2.00	2.10	2.20	0.079	0.083	0.087
E1	1.15	1.20	1.35	0.045	0.047	0.053
E	2.150	-	2.450	0.085	-	0.096
e	0.65Typ.			0.026Typ.		
e1	1.20	1.30	1.40	0.047	0.051	0.055
b	0.10	-	0.35	0.004	-	0.014
L	0.525Ref.			0.021Ref.		
L1	0.15	-	0.46	0.006	-	0.018
Z	1.94			0.076		
P	0.65			0.026		
X	0.4			0.016		
Y	0.8			0.031		

TAPE AND REEL INFORMATION-SOT-363



Packaging description:

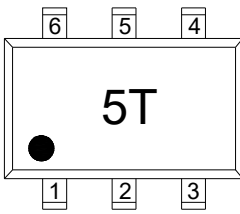
SOT-363 parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7"or 17.8cm diameter reel. The reels are clear in color and made of polystyrene plastic(anti-static coated) ..

Symbol	Millimeters	Inches
	Typ.	Typ.
A	2.25	0.089
B	2.55	0.100
C	1.20	0.047
d	Φ1.50	Φ0.059
E	1.75	0.069
F	3.50	0.138
P0	4.00	0.157
P	4.00	0.157
P1	2.00	0.079
W	8.00	0.315
D	Φ178	Φ7.008
D1	54.40	2.142
D2	13.00	0.512
G	R78.00	R3.071
H	R25.60	R1.008
I	R6.50	R0.256
W1	9.50	0.374
W2	12.30	0.484

ORDERING INFORMATION

PART No.	PACKAGE TYPE	QUANTITY(PCS) REEL	DESCRIPTION
JEU05T3	SOT-363	3,000	7 inch reel pack

MARKING CODE

Part Number	Marking Code
JEU05T3	

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