

ESD Protection Diode : TExST26



SOT-23-6L package

■ Features

1. RoHS compliant and halogen-free
2. Low clamping voltage
3. Low leakage current
4. IEC 61000-4-2 (ESD) 15~30KV (air), 8~30KV (contact)



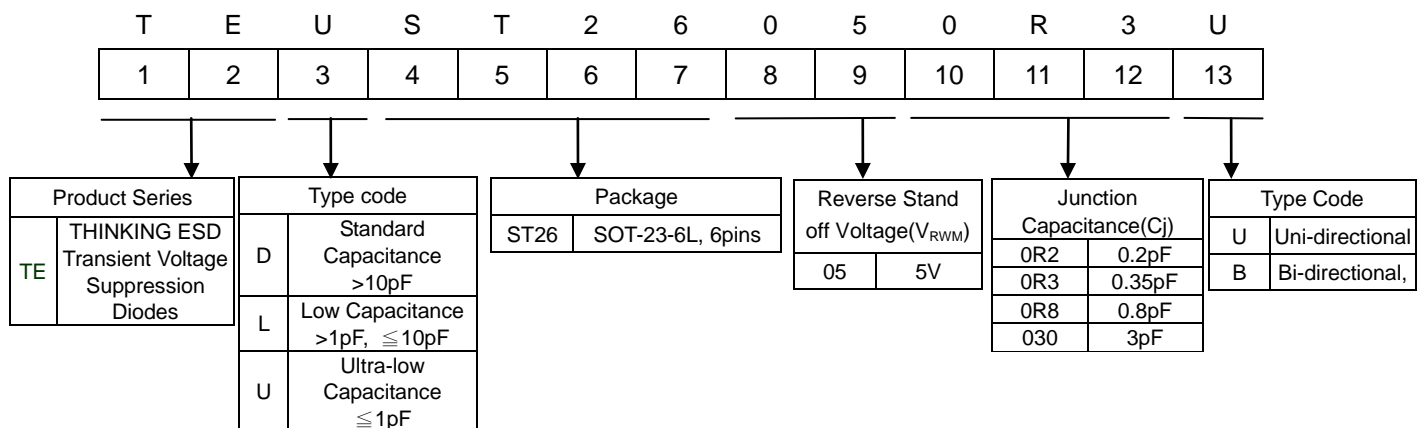
■ Recommended Applications

1. Cellular Handsets and Accessories
2. Personal Digital Assistants (PDA's)
3. Notebooks and Handhelds
4. Portable Instrumentation

■ Mechanical Data

1. Case: SOT23-6, molded plastic meets UL flammability rating 94V-0
2. Meets MSL level 1, per J-STD-020

■ Part Number Code

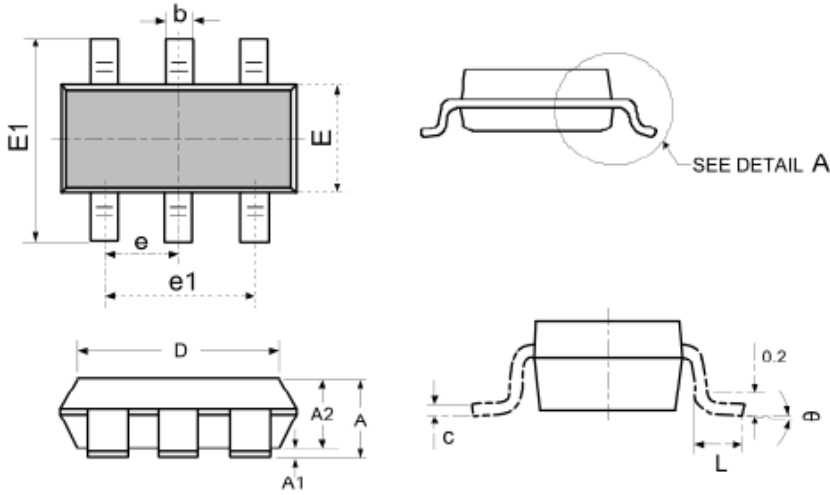


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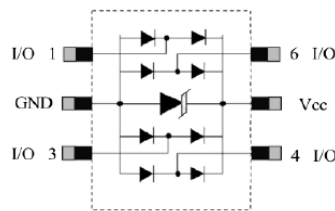
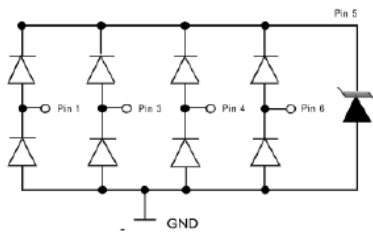
Structures and Dimensions



Unit: mm

Symbol	SOT-23-6L	
	Min	Max
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.300	0.500
c	0.100	0.200
D	2.820	3.020
E	1.500	1.700
E1	2.650	2.950
e	0.95 BSC	
e1	1.800	2.000
L	0.300	0.600
θ	0	8°

Schematic & PIN Configuration



Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

P/N	Reverse Stand-off Voltage	Reverse Leakage Current		Product Polarity	Marking	Peak Pulse Power (8/20 μ s)	Peak Pulse Current (8/20 μ s)	ESD (contact)	ESD (air)	Operating Temp.	Storage Temp.
	V_{RWM} (V)	I_R (Ua)		Uni/Bi		P_{PK} (W)	I_{PP} (A)	KV	KV	T_J (°C)	T_{stg} (°C)
	Max	Typ	Max								
TEUST26050R2U	5.0	0.05	0.5	Uni	V5V	60	3.5	12	15	-55 to +125	-55 to +125
TEUST26050R3U	5.0	0.05		Uni	V05	45	3.5	12	15	-55 to +125	-55 to +150
TEUST26050R8U	5.0	1		Uni	V05	50	3	8	15	-55 to +125	-55 to +150
TELST2605030U	5.0	0.05	0.5	Uni	S514P	500	24	30	30	-55 to +125	-55 to +125

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■ Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

TEUST26050R2U						
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5.0	V	
Breakdown Voltage	V_{BR}	6.0	7.2		V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R		0.05	0.5	μA	$V_R = V_{RWM}$
Clamping Voltage	V_C		12	15	V	$I_{PP} = 3.5\text{A}$ (8/20 μs pulse)
Junction Capacitance	C_J		0.2	0.28	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to I/O
			0.35	0.4	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to GND

TEUST26050R3U						
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5.0	V	
Breakdown Voltage	V_{BR}	6.0	6.8	8.5	V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R		0.05	0.5	μA	$V_R = V_{RWM}$
Clamping Voltage	V_C		10	13	V	$I_{PP} = 3.5\text{A}$ (8/20 μs pulse)
Junction Capacitance	C_J		0.2	0.25	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to I/O
			0.36	0.5	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to GND

TEUST26050R8U						
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5.0	V	
Breakdown Voltage	V_{BR}	6.0			V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R		1		μA	$V_R = V_{RWM}$
Clamping Voltage	V_C			9	V	$I_{PP} = 1\text{A}$ (8/20 μs pulse)
				11	V	$I_{PP} = 3\text{A}$ (8/20 μs pulse)
Junction Capacitance	C_J		0.35	0.45	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to I/O
			0.8	1	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to GND

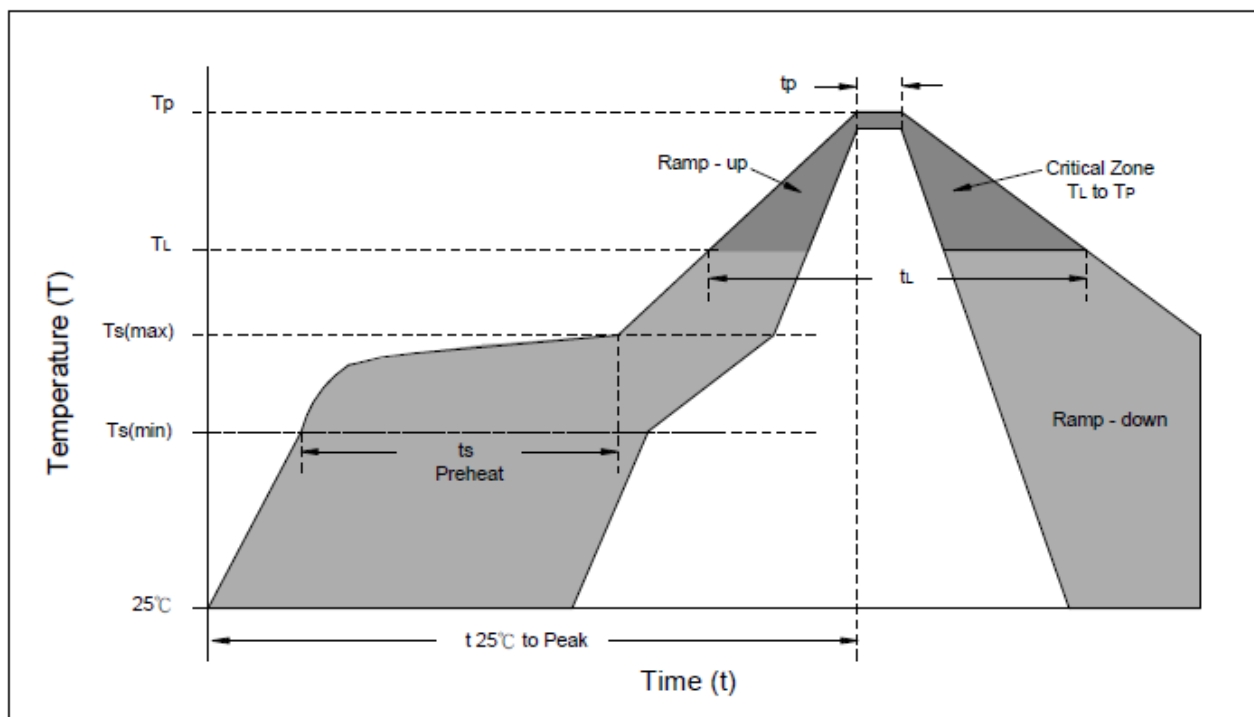
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TELST2605030U						
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5.0	V	
Breakdown Voltage	V_{BR}	6.0	6.8	8.5	V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R		0.05	0.5	μA	$V_R = V_{RWM}$
Clamping Voltage	V_C		19	25	V	$I_{PP} = 24\text{A}$ (8/20 μs pulse)
Junction Capacitance	C_J		1.5	2	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to I/O
			3.0	3.5	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to GND

■ Soldering Recommendation



Reflow Condition	Lead-free assembly
Preheat -Temperature Min(Ts min) -Temperature Min(Ts max) -Time (min to max) (ts)	150°C 200°C 60 – 180 seconds
Average ramp up rate -Temperature Liquidus (TL) to peak	3°C/second max
Ts(max) to TL -Ramp-up Rate	3°C/second max.
Reflow -Temperature Liquidus (TL) -Time (tL)	217°C 60 – 150 seconds
Peak Temperature (TP)	260°C
Time within 5°C of actual peak Temperature(TP)	20 – 40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to peak Temperature(TP)	8 minutes max.
Do not exceed	260°C

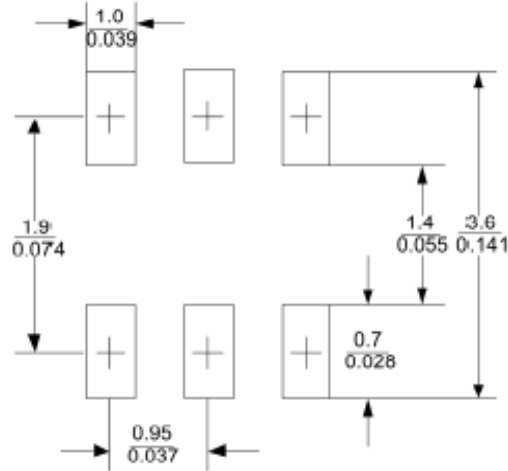
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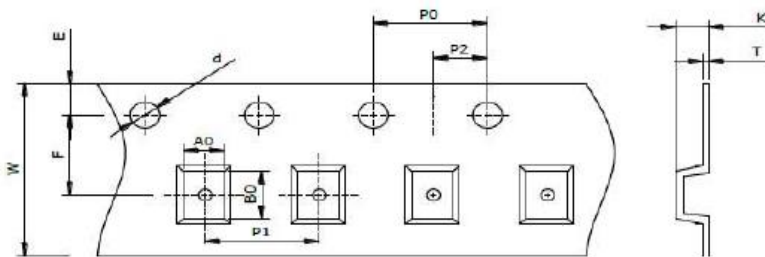


Recommended Soldering Pad Dimensions

Unit: mm(inch)

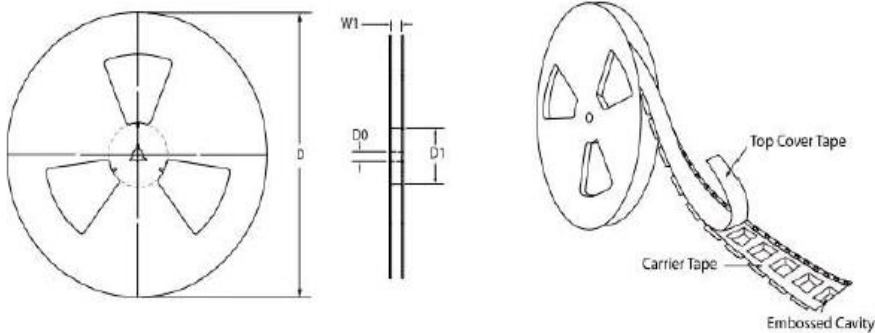


Packaging



单位: mm

Symbol	SOT-23-6L
A0	3.10 ± 0.10
B0	3.20 ± 0.10
K	1.10 ± 0.10
d	1.50 ± 0.10
D	178.00 ± 2.00
D0	13.00 ± 0.20
D1	MIN. 54.00
E	1.75 ± 0.10
F	3.50 ± 0.10
P0	4.00 ± 0.10
P1	4.00 ± 0.10
P2	2.00 ± 0.10
T	0.20 ± 0.05
W	8.00 ± 0.20
W1	MAX. 13.50



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SOT-23-6L package



■ Quantity

MPQ: 3,000pcs

Package Type	Reel Size (inch)	Reel (Kpcs)
SOT-23-6L	7	3

■ Warehouse Storage Conditions of product

- Storage condition:
 1. Storage Temperature: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
 2. Relative Humidity: $\leq 75\% \text{RH}$
 3. Keep away from corrosive atmosphere and sunlight.
- Period of Storage: 1 year.