

ESD Protection Diode : TExD25A



DFN2510-10L package

■ Features

1. RoHS compliant and halogen-free
2. Low capacitance
3. Low clamping voltage
4. Low leakage current
5. IEC 61000-4-2 (ESD) 25KV (air), 25KV (contact)



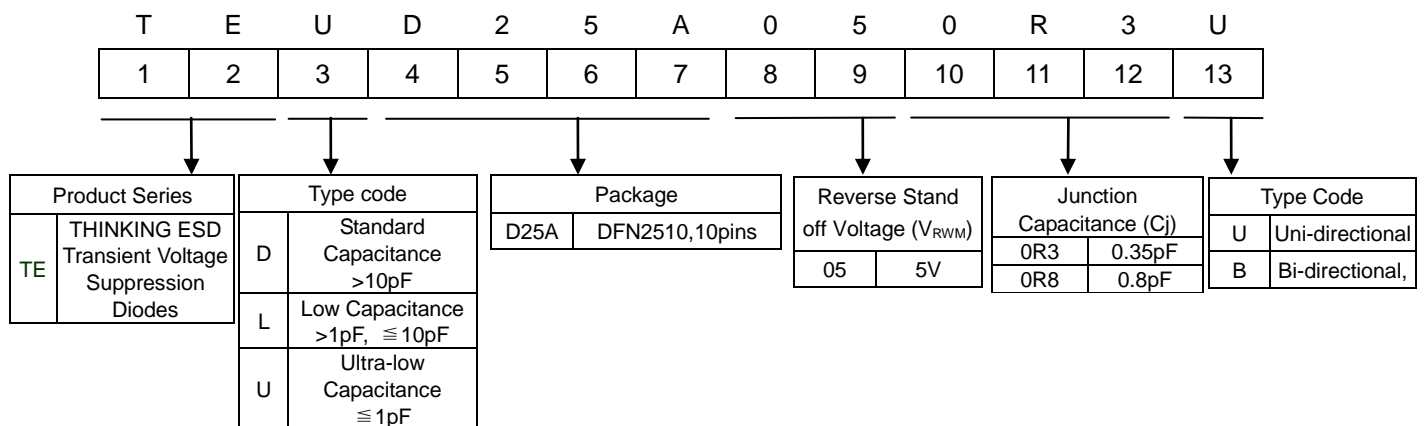
■ Recommended Applications

1. PCI Express
2. High Definition Multi-Media Interface (HDMI)
3. Serial ATA
4. USB 1.1/2.0/3.0/3.1/OTG

■ Mechanical Data

1. Case: DFN2510-10L, molded plastic meets UL flammability rating 94V-0
2. Terminals: Au plated, solderable per MIL-STD-750, method 2026
3. Meets MSL level 1, per J-STD-020

■ Part Number Code

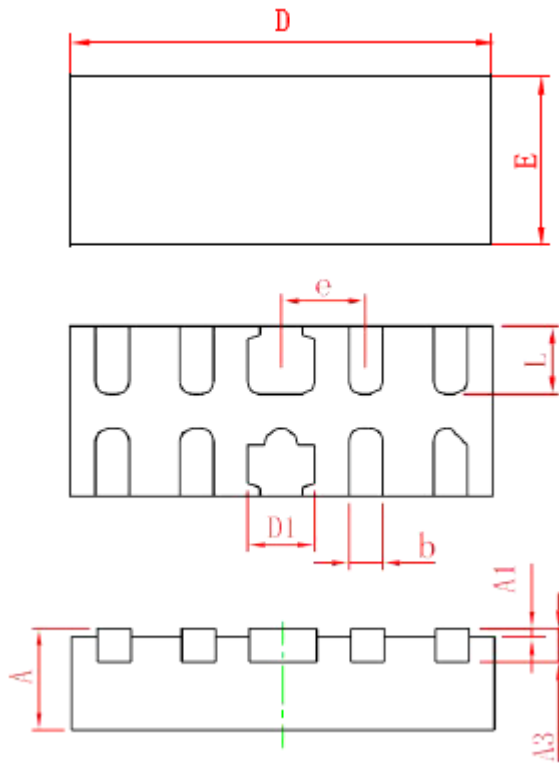


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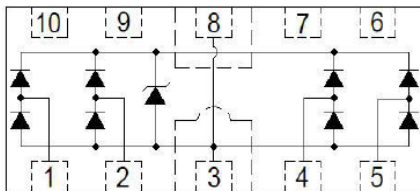
Structures and Dimensions



Unit: mm

Symbol	DFN2510-10L		
	Min	Nom	Max
A	0.45	0.5	0.55
A1	-	0.02	0.05
A3	0.1	0.15	0.2
D	2.45	2.5	2.55
E	0.95	1	1.05
D1	0.35	0.4	0.45
b	0.15	0.2	0.25
e	0.5BSC		
L	0.35	0.4	0.45

Schematic & PIN Configuration



Electrical Characteristics (T_A=25°C unless otherwise noted)

P/N	Reverse Stand-off Voltage	Reverse Leakage Current	Product Polarity	Marking	Peak Pulse Power (8/20μs)	Peak Pulse Current (8/20μs)	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	Max								
TEUD25A050R8U	5	0.5	Uni	05U	40	4	25	25	-55 to +125	-55 to +125
TEUD25A050R3U	5	0.5	Uni	5R3P	45	3.5	25	25	-55 to +125	-55 to +125

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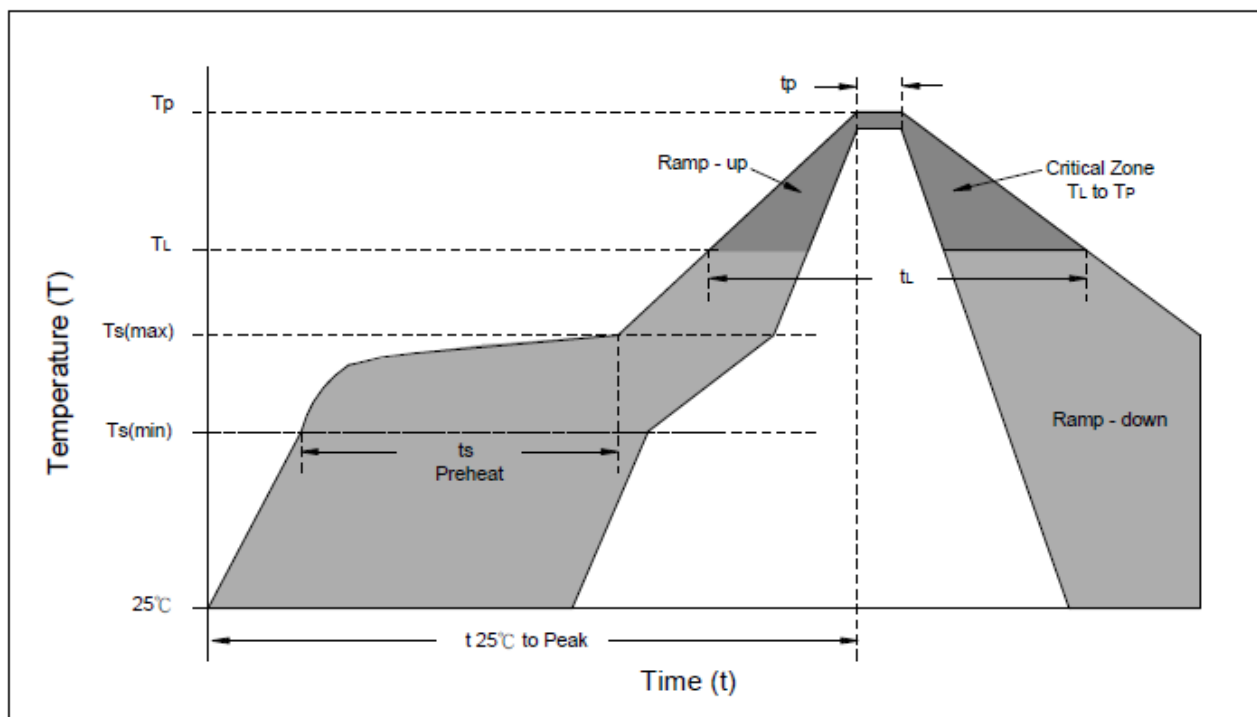


■ Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

TEUD25A050R8U						
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5	V	
Breakdown Voltage	V_{BR}	5.5	7.8		V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R			0.5	μA	$V_R = V_{RWM}$
Clamping Voltage	V_C		10	11	V	$I_{PP} = 4\text{A}$ (8/20 μs pulse)
Junction Capacitance	C_J		0.4		pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to I/O
			0.8		pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to GND

TEUD25A050R3U						
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5	V	
Breakdown Voltage	V_{BR}	5.5	7.8		V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R			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		0.25	0.35	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to I/O
			0.3	0.5	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to GND

■ Soldering Recommendation



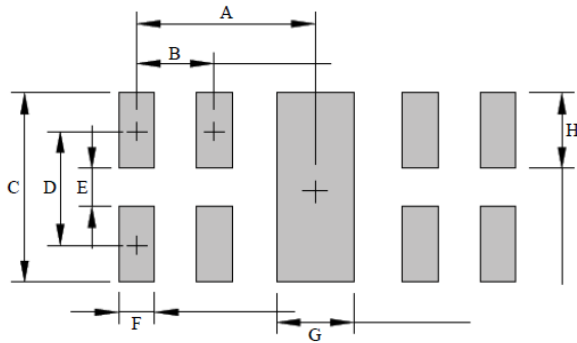
Reflow Condition	Lead-free assembly
Preheat -Temperature Min(Ts min) -Temperature Min(Ts max) -Time (min to max) (ts)	150°C 200°C 60 – 180 seconds
Average ramp up rate -Temperature Liquidus (TL) to peak	3°C/second max
Ts(max) to TL -Ramp-up Rate	3°C/second max.
Reflow -Temperature Liquidus (TL) -Time (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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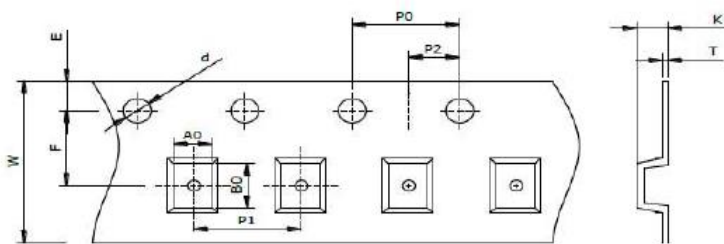


Recommended Soldering Pad Dimensions



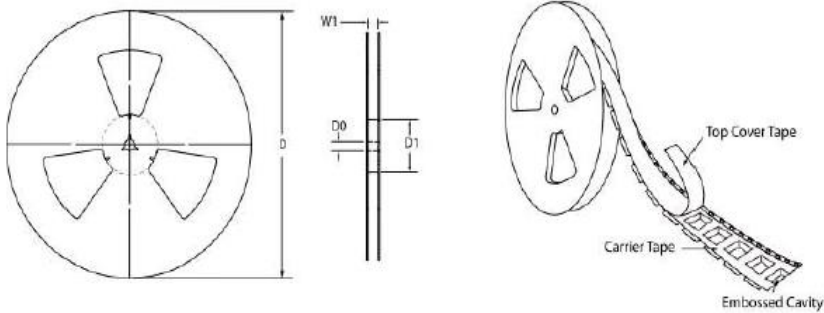
Code	Unit: mm
A	1.00
B	0.50
C	1.55
D	0.88
E	0.20
F	0.20
G	0.40
H	0.68

Packaging



Unit: mm

Symbol	DFN2510-10L
A0	1.20 ± 0.10
B0	2.70 ± 0.10
K	0.65 ± 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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■ Quantity

MPQ: 3,000pcs

Package Type	Reel Size (inch)	Reel (Kpcs)
DFN2510-10L	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.