

ESD Protection Diode : TEUD25A3R0R6U

DFN2510 package ultra-low capacitance type



■ Features

1. RoHS compliant and halogen-free
2. Working voltage: 3.3V
3. Ultra-low capacitance: 0.65pF
4. Low clamping voltage
5. Low leakage current
6. IEC 61000-4-2 (ESD) ±15KV (air), ±8KV (contact)



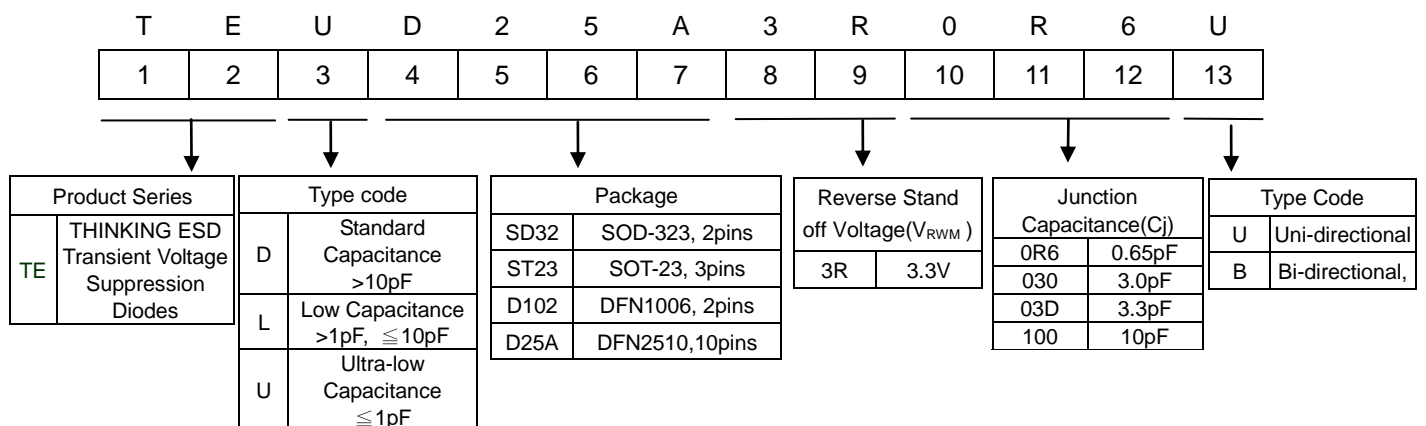
■ Recommended Applications

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, 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



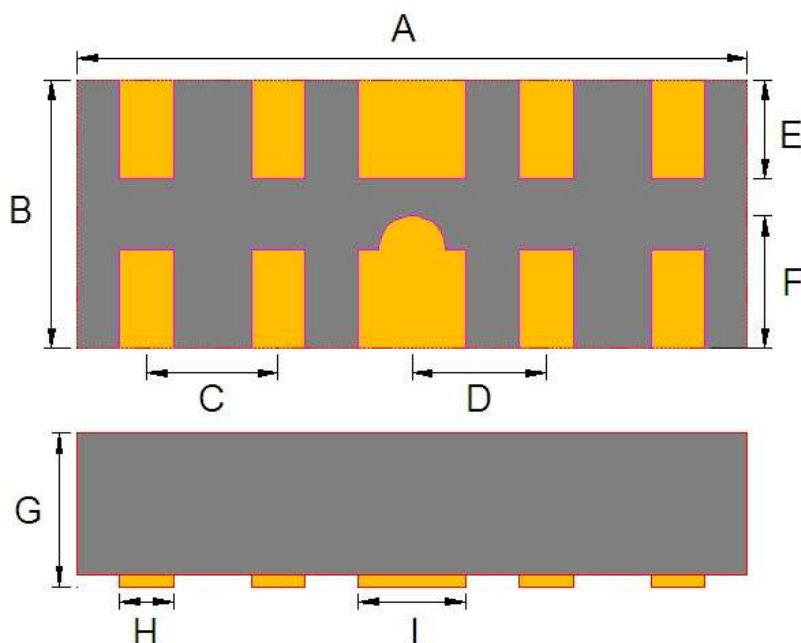
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■ Structures and Dimensions

DFN2510



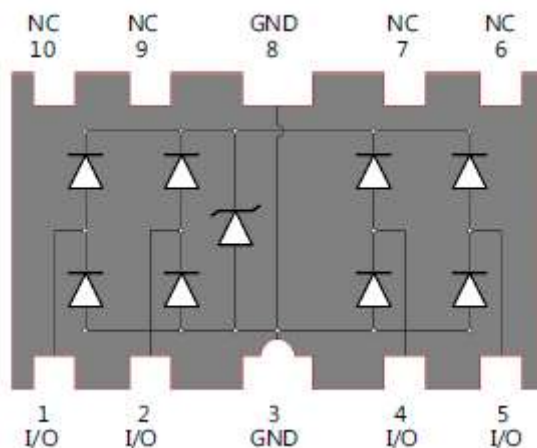
Code	Unit: mm		Unit: inch	
	Min.	Max.	Min.	Max.
A	2.45	2.55	0.096	0.100
B	0.95	1.05	0.037	0.041
C	0.45	0.55	0.018	0.022
D	0.45	0.55	0.018	0.022
E	0.30	0.40	0.012	0.016
F	0.45	0.55	0.018	0.022
G	0.45	0.55	0.018	0.022
H	0.20	0.40	0.008	0.016
I	0.35	0.45	0.014	0.018

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■ Schematic & PIN Configuration



■ Maximum Rating (Rating at 25°C ambient temperature unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power (tp= 8/20μs waveform)	P _{PPM}	150	W
Peak pulse current (tp= 8/20μs waveform)	I _{PP}	4	A
ESD per IEC61000-4-2 (Air) ESD per IEC61000-4-2 (Contact)	V _{ESD}	±15 ±8	KV
Operating junction temperature	T _J	-55~+125	°C
Storage temperature range	T _{STG}	-55~+150	°C

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	V _{RWM}	-			3.3	V
Breakdown Voltage	V _{BR}	I _R =1mA	3.4			V
Reverse Leakage Current	I _R	V _{RWM} =5V			100	nA
Clamping Voltage	V _c	I _{pp} =1A, tp= 8/20μs I _{pp} =3A, tp= 8/20μs			8 10	V
Junction Capacitance	C _j	Between I/O Pin and GND V _R =0V, f=1MHz			0.65	pF

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■ Rate and Characteristic Curve ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig1 VR - IR

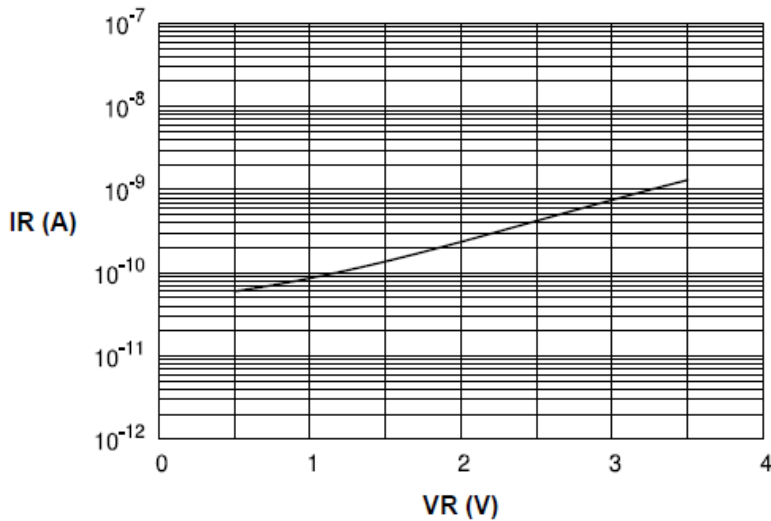


Fig2 IR - TA

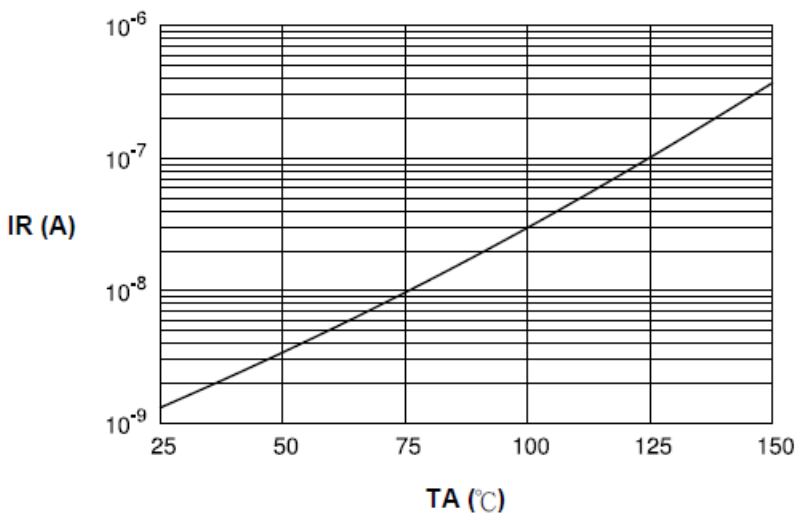
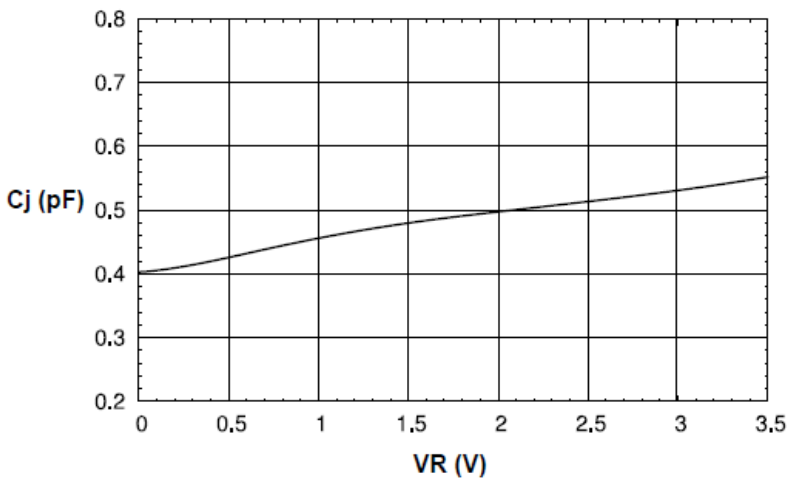


Fig3 Cj - VR

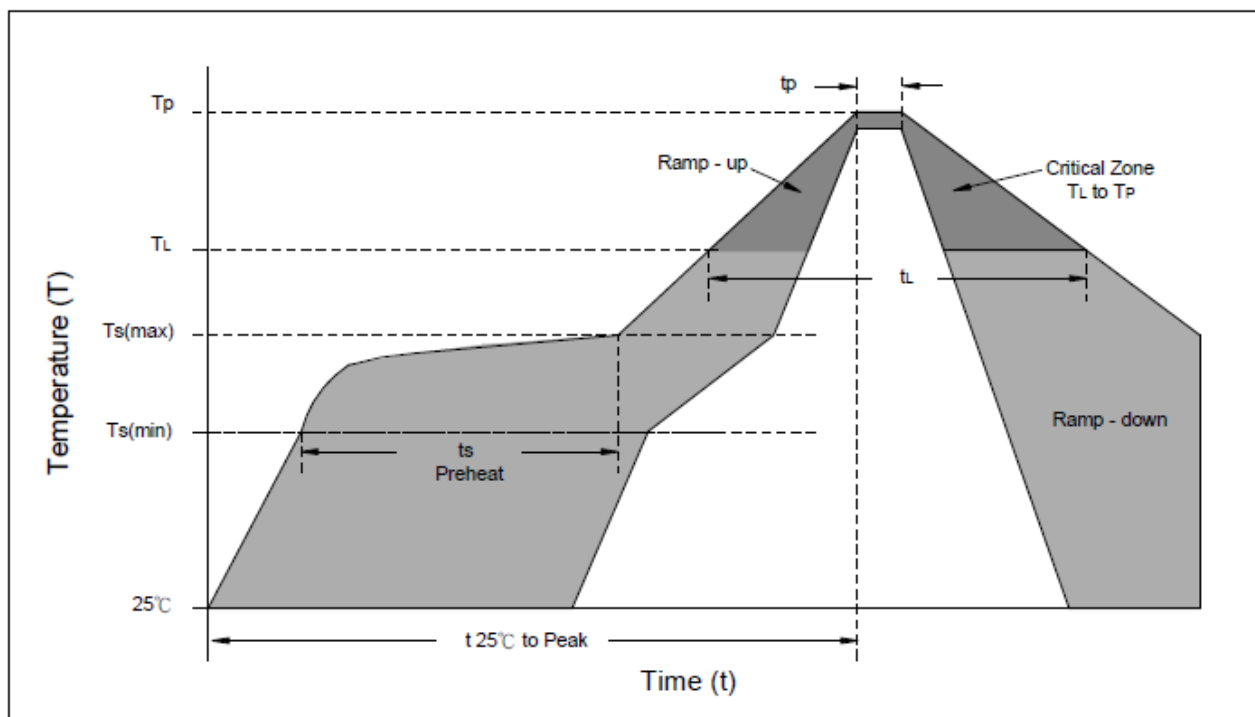


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■ Soldering Recommendation



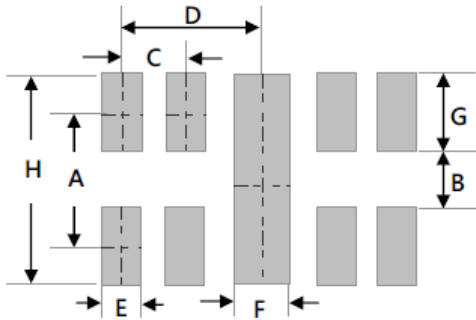
Reflow Condition	Lead-free assembly
Preheat -Temperature Min(Ts min) -Temperature Min(Ts max) -Time (min to max) (ts)	150°C 200°C 60 – 180 seconds
Average ramp up rate -Temperature Liquidus (TL) to peak	3°C/second max
Ts(max) to TL -Ramp-up Rate	3°C/second max.
Reflow -Temperature Liquidus (TL) -Time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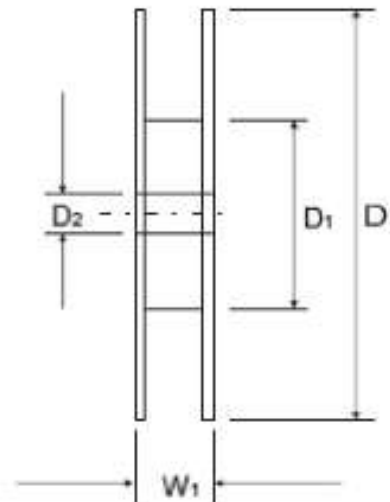
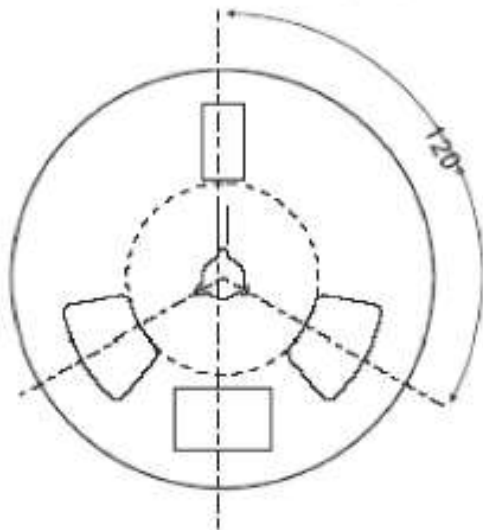
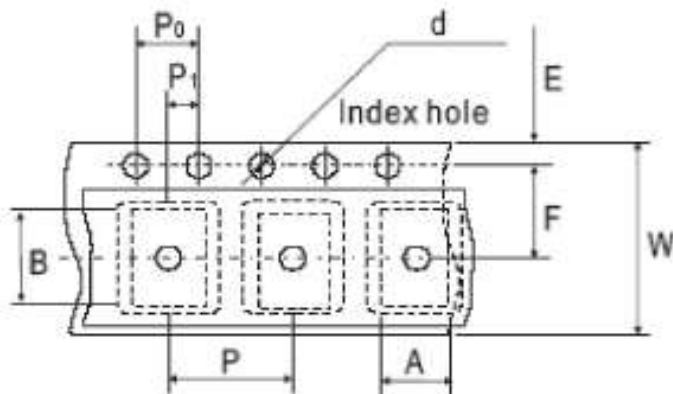


Recommended Soldering Pad Dimensions



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

Packaging



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Symbol	DFN2510 (Unit: mm)
A	1.15 ± 0.05
B	2.65 ± 0.05
C	0.65± 0.05
d	1.55 ± 0.05
D	178.00 ± 1.00
D1	60MIN
D2	13 ± 0.20
E	1.75 ± 0.10
F	3.50 ± 0.05
P	4.00 ± 0.10
P0	4.00 ± 0.10
P1	2.00 ± 0.05
T	0.20 ± 0.02
W	8.00 ± 0.30
W1	MAX. 13.50

■ Quantity

Package Type	Reel Size (inch)	Reel (Kpcs)
DFN2510	7"	3

■ Warehouse Storage Conditions of product

- Storage condition:
 - 1.Storage Temperature: -10℃~+40℃
 - 2.Relative Humidity: ≤75%RH
 - 3.Keep away from corrosive atmosphere and sunlight.
- Period of Storage: 1 year.