

ESD Protection Diode : TExD062



DFN0603 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) 20~30KV (air), 15~30KV (contact)



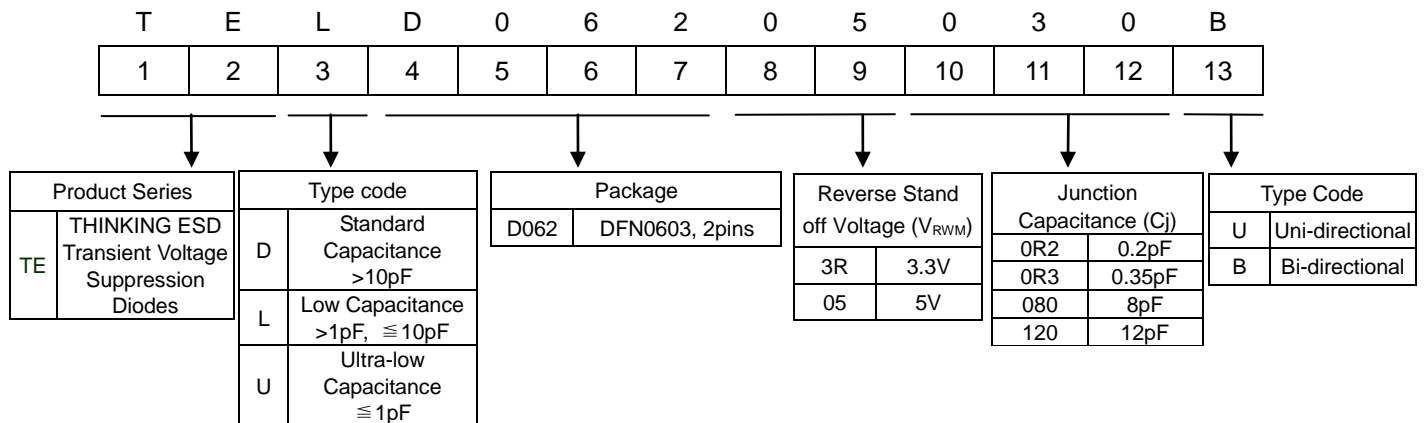
■ Recommended Applications

1. Computers and peripherals
2. High speed data lines
3. Cellular handsets and accessories
4. Portable Instrumentation
5. Audio and video equipment

■ Mechanical Data

1. Case: DFN0603 (EIA 0201), molded plastic meets UL flammability rating 94V-0
2. Meets MSL level 1, per J-STD-020

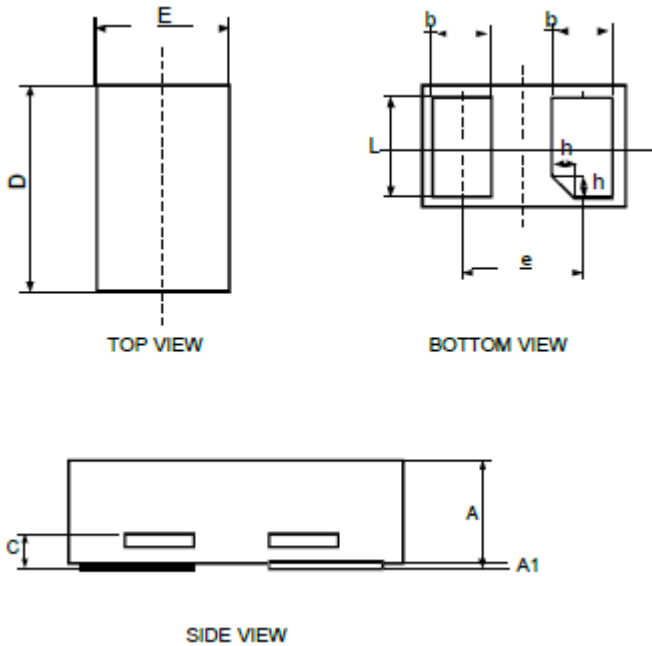
■ Part Number Code



DFN0603 package

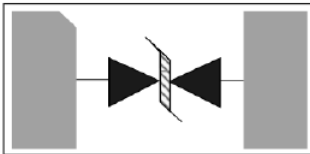
Structures and Dimensions

Unit: mm



Symbol	DFN0603		
	Min	Nom	Max
A	0.28	0.3	0.32
A1	0	0.02	0.05
C	0.05	0.1	0.15
D	0.55	0.6	0.65
E	0.25	0.3	0.35
e	0.34	0.35	0.37
b	0.14	0.19	0.24
l	0.2	0.25	0.3
h	0	0.05	0.1

Schematic & PIN Configuration



Maximum Rating (Rating at 25°C ambient temperature 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 (μA)		Uni/Bi		P_{PK} (W)	I_{PP} (A)	KV	KV	T_J (°C)	T_{stg} (°C)
	Max	Typ.	Max								
TEDD0623R120B	3.3		0.2	Bi	B	70	9	30	30	-55 to +125	-55 to +125
TEUD062050R3B	5	0.005	0.1	Bi	U5	60	3.5	±15	±20	-55 to +125	-55 to +125
TEUD062050R2B	5	0.005	0.1	Bi	H	60	3	±15	±20	-55 to +125	-55 to +125
TELD06205080B	5	0.1	0.5	Bi	D5	65	5	25	25	-55 to +125	-55 to +125

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

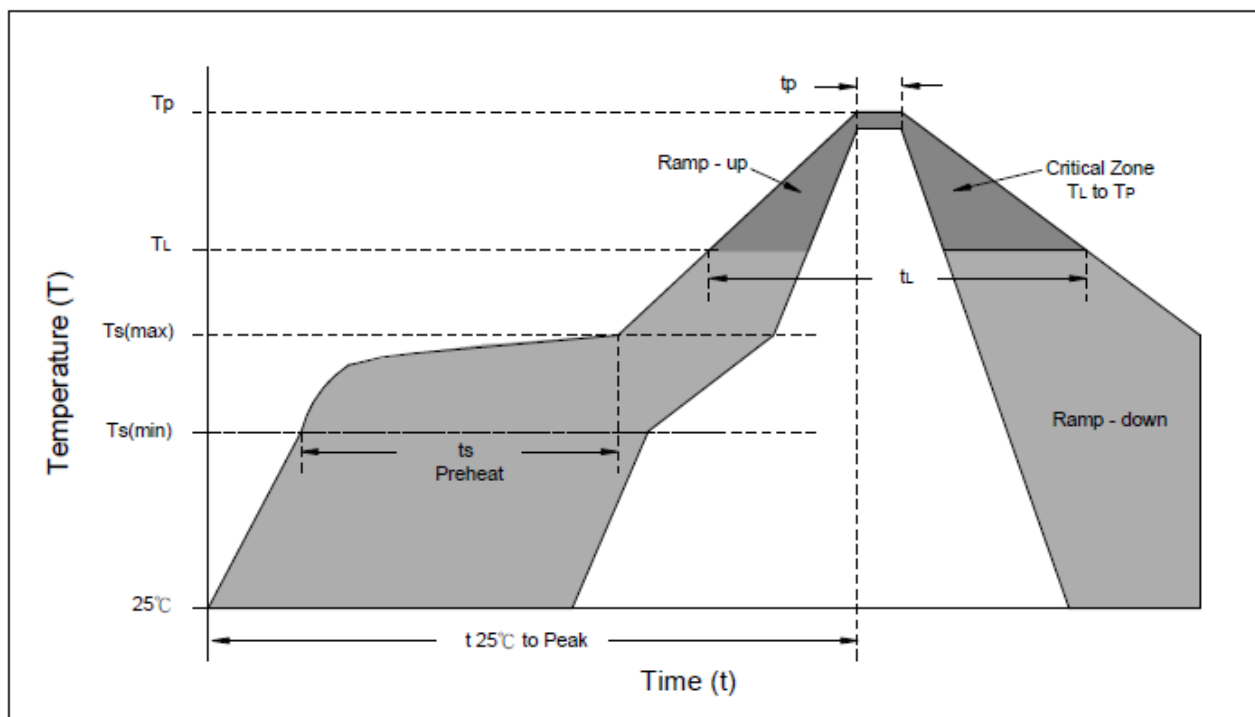
TEDD0623R120B						
Parameter	Symbol	Min	Typ.	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			3.3	V	
Breakdown Voltage	V _{BR}	3.4	4.0		V	IT = 1mA
Reverse Leakage Current	I _R			0.2	uA	VR = VRWM
Clamping Voltage	V _C		5		V	IPP = 1A (8/20μs pulse)
			8	13	V	IPP = 9A (8/20μs pulse)
Junction Capacitance	C _J		12	17	pF	VR = 0V, f = 1MHz

TEUD062050R3B						
Parameter	Symbol	Min	Typ.	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			5	V	
Breakdown Voltage	V _{BR}	5.5	8.5		V	IT = 1mA
Reverse Leakage Current	I _R		0.005	0.1	uA	VR = VRWM
Clamping Voltage	V _C		16	20	V	IPP = 3.5A (8/20μs pulse)
Junction Capacitance	C _J		0.35	0.5	pF	VR = 0V, f = 1MHz

TEUD062050R2B						
Parameter	Symbol	Min	Typ.	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			5	V	
Breakdown Voltage	V _{BR}	5.5	8.5		V	IT = 1mA
Reverse Leakage Current	I _R		0.005	0.1	uA	VR = VRWM
Clamping Voltage	V _C		20	25	V	IPP = 3A (8/20μs pulse)
Junction Capacitance	C _J		0.2	0.26	pF	VR = 0V, f = 1MHz

TELD06205080B						
Parameter	Symbol	Min	Typ.	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			5	V	
Breakdown Voltage	V _{BR}	5.5	6.5	8.5	V	IT = 1mA
Reverse Leakage Current	I _R		0.1	0.5	nA	VR = VRWM
Clamping Voltage	V _C			13	V	IPP = 5A (8/20μs pulse)
Junction Capacitance	C _J		8		pF	VR = 0V, f = 1MHz

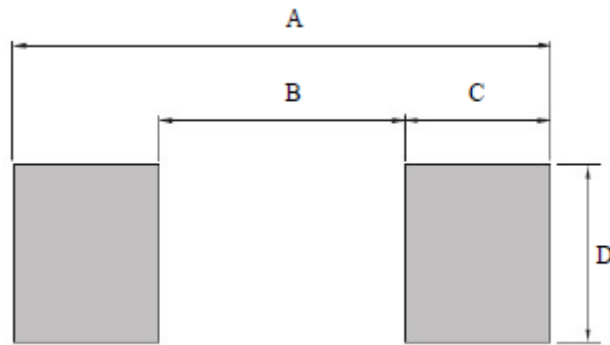
■ Soldering Recommendation



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

DFN0603 package

■ Recommended Soldering Pad Dimensions

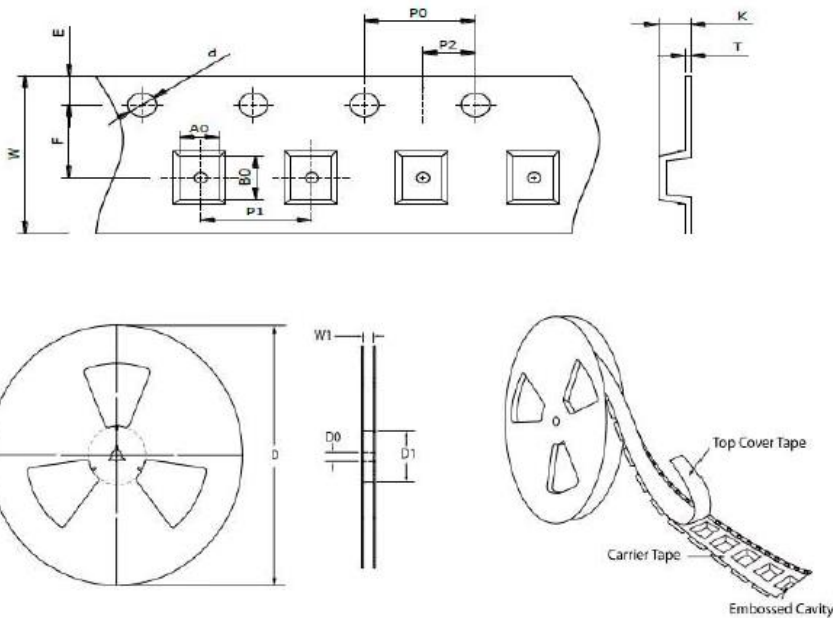


Unit: mm

Package	A	B	C	D
DFN0603 (EIA 0201)	0.64	0.2	0.22	0.36

■ Packaging

Unit: mm



Symbol	DFN0603
A0	0.37 ± 0.05
B0	0.67 ± 0.05
K	0.50 ± 0.05
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	0.18 ± 0.05
W	8.00 ± 0.20
W1	MAX. 13.50
W1	MAX. 13.50

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DFN0603 package

■ Quantity

MPQ: 10,000pcs

Package Type	Reel Size (inch)	Reel (Kpcs)
DFN0603(EIA 0201)	7	10

■ 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.