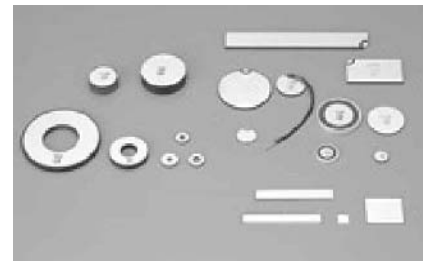


For High Power Applications

- High Reliability through use of Tamura's Piezo Material Technology
- Thin Design
- Low Output Voltage warning terminal
- ON/OFF Terminal

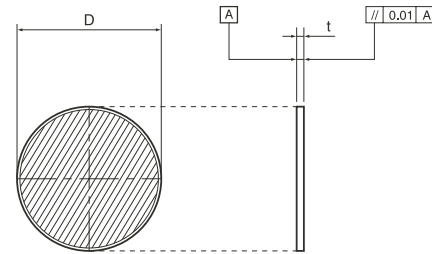


Contact Tamura for Custom Designs

Electrical Data

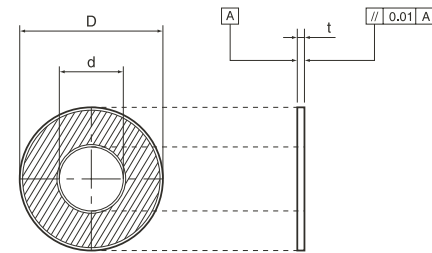
Part #	Diameter (mm)	Thickness (mm)	Frequency1 (kHz)	kp(%)	Frequency2 (kHz)	kt(%)	Capacitance (pF)
TDSE20	20.0	2.05	111.0	49	1010	45	1800
TDSE25	25.0	2.05	87.5	49	1010	45	2800
TDSE28	28.0	2.05	79.0	49	1010	45	3400
TDSE40	40.7	2.05	54.0	60	1010	45	7100
	40.7	2.55	54.0	60	800	40	5600
TDSE43	42.7	2.05	50.5	62	1010	45	7800
	42.7	11.2	50.5	68	200	31	1500
TDSE70	71.5	20.5	31.0	62	1010	45	22000

Mechanical Dimensions



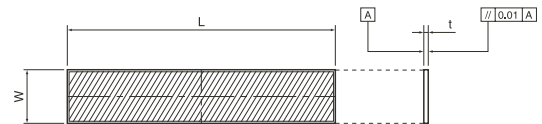
※ "t" means the thickness and "A" means the parallel tolerance of ceramic before silver electrode is printed.

Part #	Outside Diameter (mm)	Inside Diameter (mm)	Thickness (mm)	Frequency (kHz)	Coupling Coefficient	Capacitance (pF)
TBLE1507	15.2	6.6	2.00	100	42	840
TBLE3015	30.0	14.7	5.00	48	42	1300
TBLE3515	35.0	14.7	5.30	44	42	1850
TBLE5023	50.0	23.0	6.00	30	41	3000
TBLE6030	60.0	30.0	6.30	25	42	3900
TBLE7032	70.0	32.0	6.50	21.5	44	5400



※ "t" means the thickness and "A" means the parallel tolerance of ceramic before silver electrode is printed.

Part #	Length (mm)	Width (mm)	Thickness (mm)	Coupling	Frequency (kHz)	Capacitance (pF)
TPE17535	175.0	35.0	2.55	40	800	27.5
TPE20025	200.0	25.0	2.55	40	800	22.5
TPE8080	80.0	80.0	2.55	40	800	29.0



※ "t" means the thickness and "A" means the parallel tolerance of ceramic before silver electrode is printed.

TAMURA CORPORATION

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Bolt-Clamped Langevin Transducers

For Pressure Sensor type applications

TAMURA's bolt-clamped langevin type (BLT) transducers are capable of generating stabilized ultrasonic waves against the fluctuations of temperature, input power and load fluctuation, using high strength and large amplitude piezoelectric ceramic material.



Items	TBL4535D-28HB □ TBL4535D-28HN □	TBL6035D-28HN □	TBL4535D-40HB □ TBL4535D-40HN □
Dimensions(mm) Specifications			
Resonance frequency (kHz)	28		40
Resonance impedance (Ω)	below 30		below 40
Static capacitance (pF)	3500 or 3800		
Allowable input power (W)	70(Using one BLT only) / 50(Using two BLT's and more)		
Allowable operating temperature (°C)	below 120		

※ In case with the bolts, groove processing is not provided.

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