

**Piezo Diaphragm Series**

External-Driven Diaphragm Series

**External-Driven Diaphragm**

Clear Sound, High SPL, Power Consumption, Small and Lightweight ...

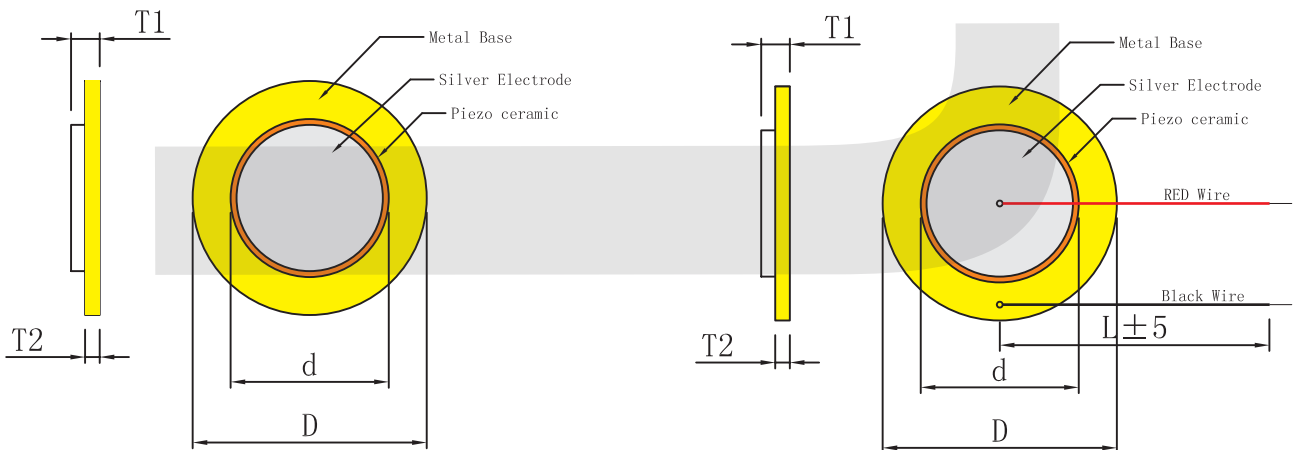
**Hide Technical Data**

Diameter: 9.9 mm to 56 mm  
 FT: Piezo Diaphragm  
 Material: T: Brass, N: Nickel-alloy, G: Stainless Steel  
 A (Shape): External-Driven Type

**Tolerance:**

D (Diameter):  $\pm 0.1\text{mm}$   
 d (Ceramic Dia):  $\pm 0.3\text{mm}$   
 T1 (Total Thickness):  $\pm 0.05\text{mm}$   
 T2 (Ceramic thickness):  $\pm 0.03\text{mm}$

Dimensions (Unit:mm)



**ORDER INFORMATION**

Product NO.: **KLS3- FT - 9.9 N - 7.5 A1**

Part Number \_\_\_\_\_  
 Piezo Diaphragm Series \_\_\_\_\_  
 Diameter \_\_\_\_\_  
 Material T:Brass,N:Nickel-alloy,G:Stainless Steel  
 Shape \_\_\_\_\_  
 Frequency \_\_\_\_\_

## Piezo Diaphragm Series

### External-Driven Diaphragm Series

Order Code	Shape	C (nF)	Zr (Ω)	Fr (KHz)	D (mm)	d (mm)	T1 (mm)	T2 (mm)	Metal
KLS3-FT-9.9N-7.5A1	A1	10nF ±30%	500	7.5 ±1.0	9.9	7	0.12	0.05	Alloy
KLS3-FT-10.5N-10.0A1	A1	5.5nF ±30%	500	10.0 ±0.8	10.5	8	0.17	0.05	Alloy
KLS3-FF-11N-6.5A1	A1	10nF ±30%	500	6.5 ±0.5	11	8	0.12	0.05	Alloy
KLS3-FT-11N-9.0A1	A1	11nF ±30%	500	9.0 ±0.5	11	8	0.17	0.1	Alloy
KLS3-FT-11G-10.0A1	A1	9.5nF ±30%	300	10 ±0.5	11	8	0.19	0.11	Brass
KLS3-FT-11G-9.6A1	A1	12nF ±30%	500	9.6 ±0.5	11	8	0.17	0.1	SUS
KLS3-FT-11T-9.6A1	A1	12nF ±30%	500	9.6 ±0.5	11	8	0.17	0.1	Brass
KLS3-FT-12.5T-8.5 A1	A1	11nF ±30%	300	8.5 ±0.5	12.5	10	0.22	0.1	Brass
KLS3-FT-12N-5.5A1	A1	13nF ±30%	500	5.5 ±0.5	12	9	0.12	0.05	Alloy
KLS3-FT-12N-6.0A1	A1	13nF ±30%	500	6.0 ±0.5	12	9	0.12	0.05	Alloy
KLS3-FT-12T-5.3A1	A1	15nF ±30%	500	5.3 ±0.5	12	9	0.12	0.05	Brass
KLS3-FT-12T-5.8A1	A1	16nF ±30%	500	5.8 ±0.6	12	9.4	0.12	0.05	Brass
KLS3-FT-12T-6.0A1	A1	17nF ±30%	500	6.0 ±0.5	12	9	0.12	0.06	Brass
KLS3-FT-12T-6.5A1	A1	15nF ±30%	300	6.5 ±0.5	12	9	0.15	0.09	Brass
KLS3-FT-12T-8.0A1	A1	15nF ±30%	300	8.0 ±0.5	12	9	0.19	0.1	Brass
KLS3-FT-12T-8.5A1	A1	10nF_30%	300	8.5 ±0.7	12	9	0.2	0.08	Brass
KLS3-FT-12T-9.05 A1	A1	15nF ±30%	300	9.05 ±0.5	12	9	0.22	0.1	Brass
KLS3-FT-12T-9.0A1	A1	12nF ±30%	300	9.0 ±0.5	12	10	0.2	0.1	Brass
KLS3-FT-13.5T-7.0 A1	A1	12nF ±30%	300	7.0 ±0.5	13.5	9	0.22	0.1	Brass
KLS3-FT-13N-4.5A1	A1	15nF ±30%	500	4.5 ±0.5	13	9	0.12	0.05	Alloy
KLS3-FT-13T-6.5A1	A1	13nF ±30%	500	6.5 ±0.5	13	9	0.18	0.1	Brass
KLS3-FT-14N-4.3A1	A1	70nF ±30%	300	4.3 ±0.5	14	12	0.12	0.05	Alloy
KLS3-FT-15N-4.2A1	A1	34nF ±30%	500	3.5 ±0.5	15	12	0.13	0.05	Alloy
KLS3-FT-15N-4.6A1	A1	20nF ±30%	500	4.6 ±0.5	15	12	0.2	0.1	Alloy
KLS3-FT-15T-10.0A1	A1	9nF ±30%	300	10.0 ±0.5	15	11.3	0.37	0.2	Brass
KLS3-FT-15T-3.5A1	A1	35nF ±30%	300	3.5 ±0.5	15	12	0.12	0.05	Brass
KLS3-FT-15T-4.5A1	A1	12nF ±30%	300	4.5 ±0.5	15	9	0.2	0.1	Brass
KLS3-FT-15T-5.8A1	A1	10nF ±30%	800	5.8 ±0.5	15	9	0.21	0.09	Brass
KLS3-FT-15T-6.0A1	A1	15nF ±30%	300	6.0 ±0.5	15	12	0.22	0.1	Brass
KLS3-FT-15T-6.0A1	A1	10nF ±30%	300	6.0 ±0.5	15	11.3	0.22	0.1	Brass

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KLS3-FT-15T-6.0A1	A1	11nF±30%	300	6.0±0.5	15	10	0.22	0.1	Brass
KLS3-FT-15T-6.0A1	A1	9nF±30%	300	9.05±0.5	15	10	0.32	0.12	Brass
KLS3-FT-17.2N-3.5A1	A1	32nF±30%	300	3.5±0.5	17.2	13.4	0.18	0.1	Alloy
KLS3-FT-18T-3.6A1	A1	15nF±30%	300	3.6±0.5	18	12	0.2	0.08	Brass
KLS3-FT-19.9T-3.6A1	A1	20nF±30%	300	3.6±0.5	20	14	0.22	0.1	Brass
KLS3-FT-20G-7.5A1	A1	12nF±30%	300	7.5±0.5	20	15	0.45	0.23	SUS
KLS3-FT-20N-2.0A1	A1	70nF±30%	300	2.0±0.5	20	15	0.13	0.05	Alloy
KLS3-FT-20N-2.6A1	A1	24nF±30%	300	2.6±0.5	20	15	0.15	0.05	Alloy
KLS3-FF-20N-3.2A1	A1	24nF±30%	300	3.2±0.5	20	15	0.2	0.1	Alloy
KLS3-FT-20T-2.5A1	A1	70nF±30%	300	2.5±0.5	20	15	0.15	0.08	Brass
KLS3-FT-20T-3.0A1	A1	30nF±30%	300	3.0±0.3	20	15	0.19	0.1	Brass
KLS3-FT-20T-3.4A1	A1	20nF±30%	300	3.4±0.5	20	15	0.22	0.1	Brass
KLS3-FT-20T-3.6A1	A1	21nF±30%	300	3.6±0.5	20	15	0.22	0.1	Brass
KLS3-FT-20T-3.8A1	A1	19nF±30%	300	3.8±0.5	20	15	0.26	0.13	Brass
KLS3-FT-20T-4.0A1	A1	20nF±30%	300	4.0±0.5	20	15	0.22	0.14	Brass
KLS3-FT-20T-4.0A1	A1	26nF±30%	300	4.0±0.5	20	15	0.26	0.14	Brass
KLS3-FT-20T-4.8A1	A1	16nF±30%	300	4.8±0.5	20	15	0.3	0.15	Brass
KLS3-FT-20T-5.5A1	A1	15nF±30%	300	5.5±0.5	20	15	0.37	0.2	Brass
KLS3-FT-20T-6.0A1	A1	13nF±30%	300	6.0±0.5	20	15	0.42	0.2	Brass
KLS3-FT-20T-6.5A1	A1	15nF±30%	300	6.5±0.5	20	15	0.42	0.25	Brass
KLS3-FT-20T-7.2A1	A1	12nF±30%	300	7.2±0.5	20	15	0.47	0.25	Brass
KLS3-FT-21G-3.3A1	A1	26nF±30%	300	3.3±0.5	21.5	15	0.21	0.1	SUS
KLS3-FT-21T-4.5A1	A1	18nF±30%	300	4.5±0.5	21	15	0.3	0.15	Brass
KLS3-FT-22T-4.8A1	A1	12nF±30%	300	4.8±0.5	22	16.8	0.37	0.15	Brass
KLS3-FT-27G-3.6A1	A1	20nF±30%	300	3.6±0.5	27	20	0.42	0.2	SUS
KLS3-FT-27T-2.0A1	A1	50nF±30%	300	2.0±0.5	27	20	0.2	0.1	Brass
KLS3-FT-27T-2.3A1	A1	45nF±30%	300	2.3±0.5	27	20	0.22	0.1	Brass
KLS3-FT-27T-2.5A1	A1	45nF±30%	300	2.5±0.5	27	20	0.26	0.14	Brass
KLS3-FT-27T-2.8A1	A1	20nF±30%	300	2.8±0.5	27	20	0.32	0.1	Brass
KLS3-FT-27T-3.5A1	A1	30nF±30%	300	3.5±0.5	27	20	0.37	0.2	Brass

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KLS3-FT-27T-3.6A1	A1	20nF±30%	300	3.6±0.5	27	20	0.42	0.2	Brass
KLS3-FT-27T-4.0A1	A1	23nF±30%	300	4.0±0.5	27	20	0.52	0.3	Brass
KLS3-FT-27T-4.0A1	A1	20nF±30%	300	4.0±0.5	27	20	0.47	0.25	Brass
KLS3-FT-27T-4.6A1	A1	20nF±30%	300	4.6±0.5	27	20	0.52	0.3	Brass
KLS3-FT-30T-0.9A1	A1	49nF±30%	300	0.9±0.5	30	20	0.16	0.05	Brass
KLS3-FT-31G-1.6A1	A1	45nF±30%	300	1.6±0.5	31	20	0.22	0.1	SUS
KLS3-FT-31N-1.4A1	A1	45nF±30%	300	1.4±0.5	31	20	0.22	0.1	Alloy
KLS3-FT-31T-1.4A1	A1	45nF±30%	300	1.4±0.5	31	20	0.22	0.1	Brass
KLS3-HFT-31T-1.4A1	A1	70nF±T30%	300	1.4±0.5	31	20	0.22	0.1	Brass
KLS3-FT-32T-2.9A1	A1	30nF±30%	300	2.9±0.5	32	25	0.42	0.2	Brass
KLS3-FT-35T-1.8A1	A1	70nF±30%	300	1.8±0.5	35	25	0.32	0.2	Brass
KLS3-FT-35T-2.3A1	A1	28nF±30%	300	2.3±0.5	35	25	0.42	0.2	Brass
KLS3-FT-35T-2.6A1	A1	28nF±30%	300	2.6±0.5	35	25	0.52	0.3	Brass
KLS3-FT-38T-2.8A1	A1	32nF±30%	300	2.8±0.2	38	25	0.73	0.47	Brass
KLS3-FT-39T-2.4A1	A1	32nF±30%	400	2.4±0.5	39	25	0.66	0.4	Brass
KLS3-FT-41N-0.7A1	A1	80nF±30%	800	0.7±0.5	41	25	0.22	0.1	Alloy
KLS3-FT-41T-1.0A1	A1	80nF±30%	800	1.0±0.5	41	25	0.22	0.1	Brass
KLS3-FT-41T-1.2A1	A1	75nF±30%	800	1.2±0.5	41	25	0.27	0.15	Brass
KLS3-FT-43T-0.8A1	A1	75nF±30%	800	0.8±0.5	43	25	0.22	0.1	Brass
KLS3-FT-45T-0.7A1	A1	80nF±30%	300	0.7±0.5	45	25	0.22	0.1	Brass
KLS3-FT-50T-1.8A1	A1	75nF±30%	300	1.8±0.5	50	25	0.22	0.1	Brass
KLS3-FT-50T-2.1A1	A1	75nF±30%	300	2.1±0.5	50	25	0.27	0.15	Brass
KLS3-FT-50T-2.7A1	A1	35nF±30%	300	2.7±0.5	50	25	0.42	0.2	Brass
KLS3-FT-50T-3.0A1	A1	28nF±30%	300	3.0±0.5	50	25	0.42	0.2	Brass
KLS3-FT-55G-3.2A1	A1	30nF±30%	300	3.2±0.5	55	25	0.42	0.2	SUS