

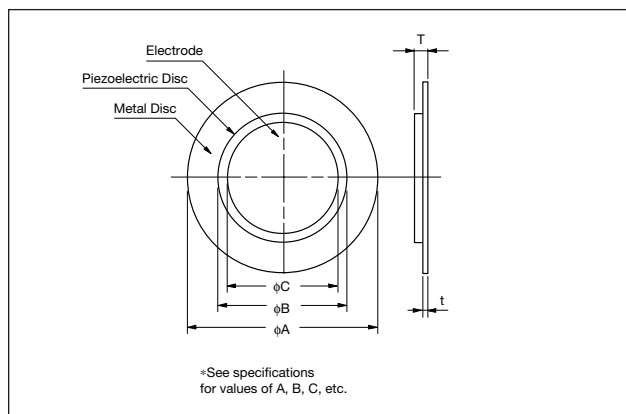
Piezo Ceramic Elements



KBS Series

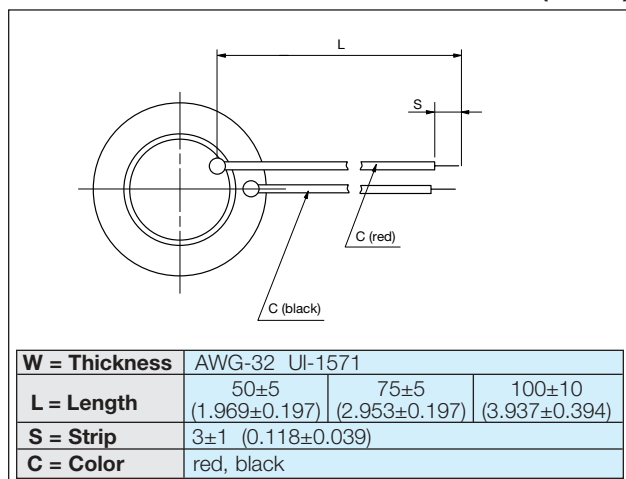


DIMENSIONS



STANDARD LEADS

millimeters (inches)



FEATURES

- Wide variety of tones by connecting to IC
- Low current consumption, thin and light design
- High reliability and no contact noise

APPLICATIONS

- Clocks, electronic calculators, pagers, cameras
- Equipment using microcontrollers (microwave ovens, TVs, stereos, automobiles, etc.)
- Telecommunications (facsimile machines, telephones)
- Electronic medical instruments

HOW TO ORDER

KBS - 20 DA - 7 A □ -1

Option Spec

Lead-wire spec etc.

Metal

Blank = Brass

2-Electrode Type

A = Element only

C = With lead

Resonant Frequency

Appearance

Disc-shaped buzzer

Diameter

Series

SPECIFICATIONS

millimeters (inches)

Part Number	Resonant Frequency (kHz)	Resonant Impedance (Ω)	Static Capacitance (pF)	Dimensions					Metal Disc Material
				Metal Disc (ϕA)	Ceramic Disc (ϕB)	Electrode (ϕC)	Total Thickness (T)	Metal Disc Thickness (t)	
KBS-13DA-12A	12.0±1.2	700	5,000±30%	13.4±0.10 (0.528±0.004)	10.0±0.30 (0.394±0.012)	9.00 (0.354)	0.36±0.10 (0.014±0.004)	0.15±0.03 (0.006±0.001)	Brass
KBS-15DA-9A-2	10.5±3.0	600	8,000±30%	15.0±0.10 (0.591±0.004)	12.0±0.30 (0.472±0.012)	11.0 (0.433)	0.42±0.10 (0.017±0.004)	0.20±0.03 (0.008±0.001)	Brass
KBS-20DA-7A	6.6±1.0	300	10,000±30%	20.0±0.10 (0.787±0.004)	14.2±0.30 (0.559±0.012)	13.0 (0.512)	0.45±0.10 (0.018±0.004)	0.20±0.03 (0.008±0.001)	Brass
KBS-23DA-4A	4.0±1.0	600	12,000±30%	22.8±0.10 (0.898±0.004)	15.0±0.30 (0.591±0.012)	14.0 (0.551)	0.41±0.10 (0.016±0.004)	0.15±0.03 (0.006±0.001)	Brass
KBS-27DA-5A	4.6±0.5	200	20,000±30%	27.0±0.10 (1.063±0.004)	20.2±0.30 (0.795±0.012)	19.0 (0.748)	0.53±0.10 (0.021±0.004)	0.25±0.03 (0.010±0.001)	Brass
KBS-30DA-1A	1.4±0.5	500	*48,000±30%	30.0±0.10 (1.181±0.004)	20.2±0.30 (0.795±0.012)	19.0 (0.748)	0.23±0.10 (0.009±0.004)	0.10±0.03 (0.004±0.001)	Brass
KBS-35DA-3A	2.9±0.5	200	30,000±30%	35.0±0.10 (1.378±0.004)	25.0±0.30 (0.984±0.012)	23.5 (0.925)	0.53±0.10 (0.021±0.004)	0.25±0.03 (0.010±0.001)	Brass

*Measured at 120Hz, all others at 1kHz

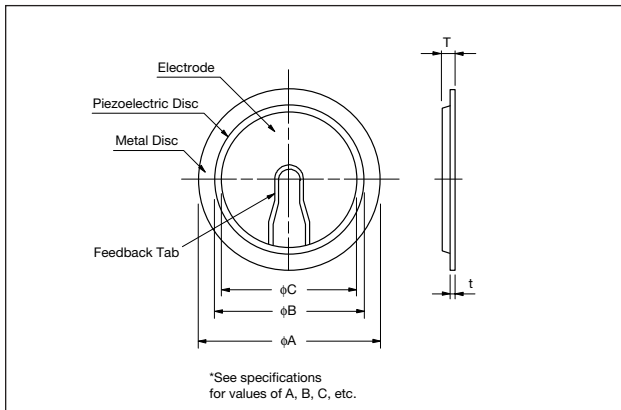
Piezo Ceramic Elements



KBS Series

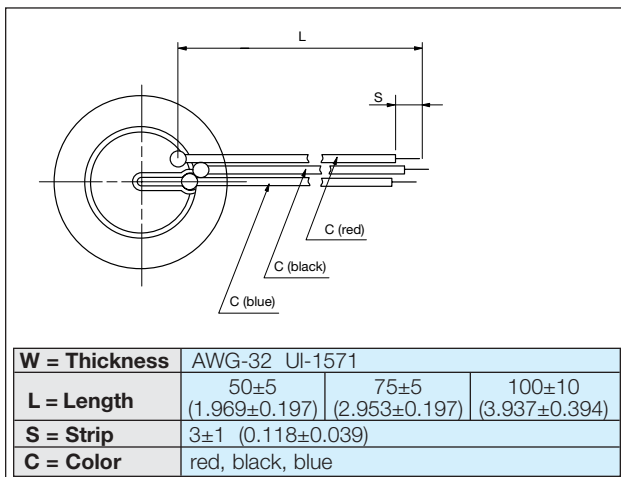


DIMENSIONS



STANDARD LEADS

millimeters (inches)



FEATURES

- High sound pressure level and clear sound by connecting to a self oscillating circuit
- Thin and light design
- High reliability and no contact noise

APPLICATIONS

- Smoke detectors, security alarms and other warning devices
- Pagers, electronic calculators, alarm signals
- Telephones

HOW TO ORDER

KBS - 35 DA - 3 G □ -3

Option Spec

Lead-wire spec etc.

Metal Disc Material

□ = Brass

S = Stainless Steel

L = 42 Alloy

3-Electrode Type

G = G-Pattern

GC = G-Pattern with Leads

Resonant Frequency

Appearance

Disc-shaped buzzer

Diameter (mm)

Series

SPECIFICATIONS (G TYPE)

millimeters (inches)

Part Number	Resonant Frequency (kHz)	Resonant Impedance (Ω)	Static Capacitance (pF)	Dimensions					Metal Disc Material
				Metal Disc (ϕA)	Ceramic Disc (ϕB)	Electrode (ϕC)	Total Thickness (T)	Metal Disc Thickness (t)	
KBS-27DA-5G	4.6±0.5	200	16,000±30%	27.0±0.10 (1.063±0.004)	20.2±0.30 (0.795±0.012)	19.0 (0.748)	0.53±0.10 (0.021±0.004)	0.25±0.03 (0.010±0.001)	Brass
KBS-35DA-3G	2.9±0.5	200	25,000±30%	35.0±0.10 (1.378±0.004)	25.0±0.30 (0.984±0.012)	23.6 (0.929)	0.53±0.10 (0.021±0.004)	0.25±0.03 (0.010±0.001)	Brass