

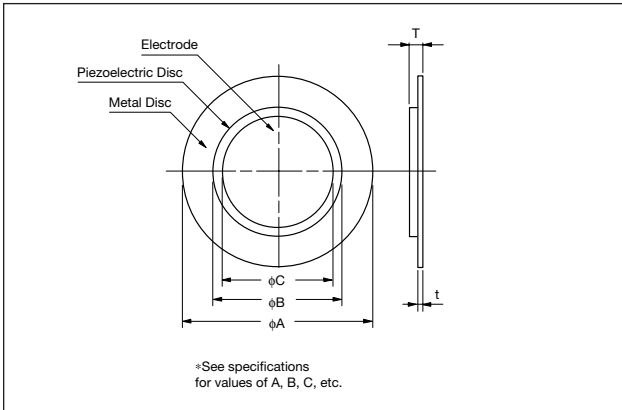
Piezo Ceramic Elements



KBS Series

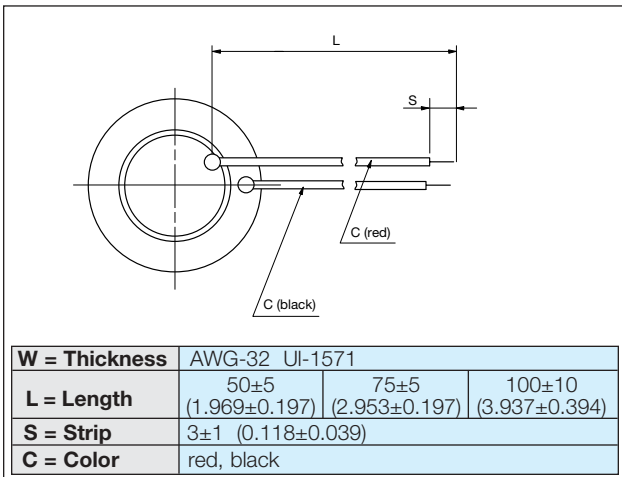


DIMENSIONS



STANDARD LEADS

millimeters (inches)



FEATURES

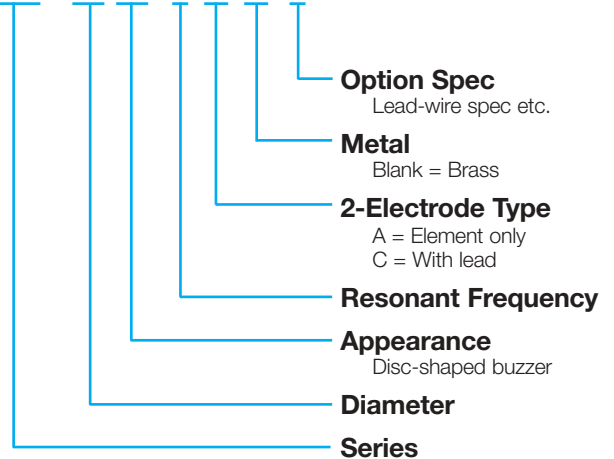
- Wide variety of tones by connecting to IC
- Low current consumption, thin and light design
- High reliability and no contact noise

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



SPECIFICATIONS

millimeters (inches)

| Part Number | Resonant Frequency (kHz) | Resonant Impedance (Ω) | Static Capacitance (pF) | Dimensions | | | | | Metal Disc Material |
|----------------------|--------------------------|------------------------|-------------------------|----------------------------|----------------------------|-----------------|----------------------------|----------------------------|---------------------|
| | | | | Metal Disc (øA) | Ceramic Disc (øB) | Electrode (øC) | 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

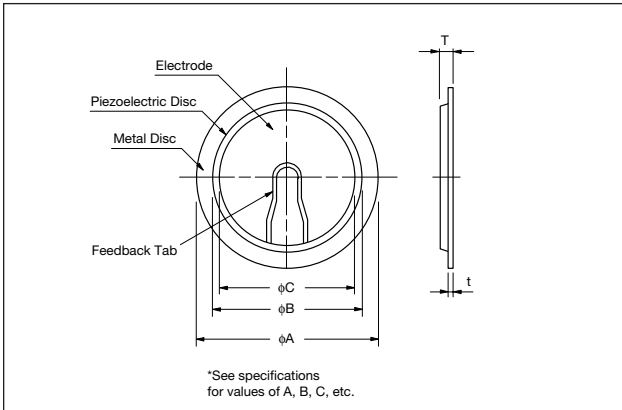
Piezo Ceramic Elements



KBS Series

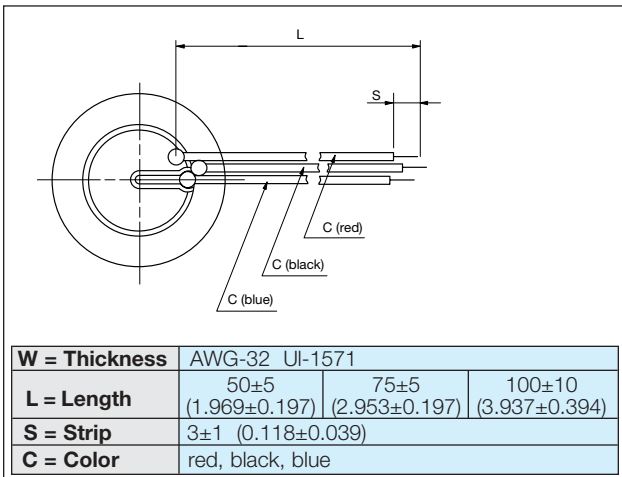


DIMENSIONS



STANDARD LEADS

millimeters (inches)



FEATURES

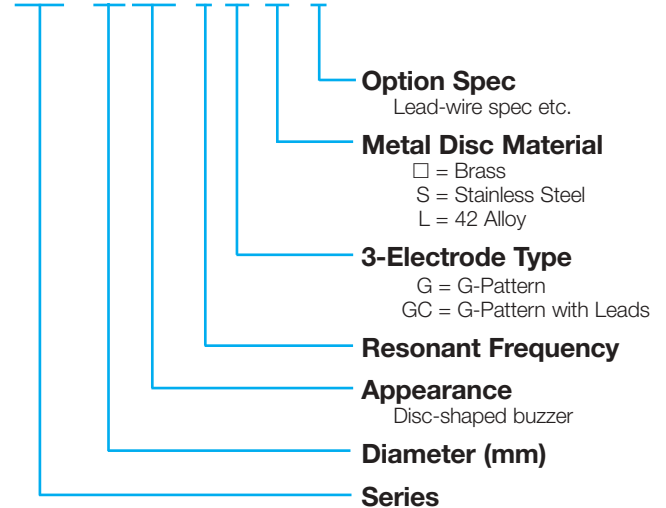
- High sound pressure level and clear sound by connecting to a self oscillating circuit
- Thin and light design
- High reliability and no contact noise

APPLICATIONS

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

HOW TO ORDER

KBS - 35 DA - 3 G □ -3



SPECIFICATIONS (G TYPE)

millimeters (inches)

| Part Number | Resonant Frequency (kHz) | Resonant Impedance (Ω) | Static Capacitance (pF) | Dimensions | | | Total Thickness (T) | Metal Disc Thickness (t) | Metal Disc Material |
|-------------|--------------------------|------------------------|-------------------------|----------------------------|----------------------------|-----------------|----------------------------|----------------------------|---------------------|
| | | | | Metal Disc (φA) | Ceramic Disc (φB) | Electrode (φC) | | | |
| 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 |