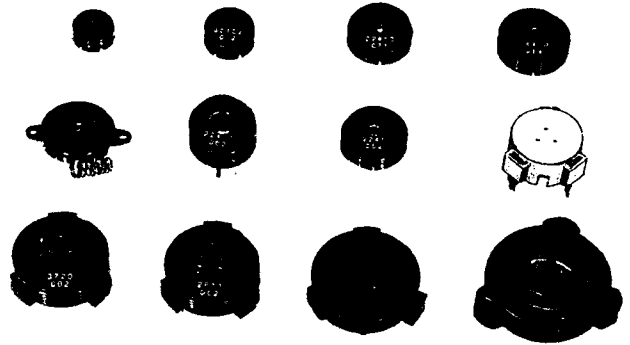


圧電サウンダ

Piezoelectric Sounders

Type EFB R□/A□/B□



圧電サウンダは、圧電振動板をケース内に組み込み音響効果と取り扱いの容易性を図ったもので、リード線タイプとプリント基板への挿着を考慮した端子タイプがあります。

Piezoelectric Sounder consisting of piezoelectric ceramic buzzer element enclosed in a housing, is designed to obtain an efficient acoustic effect and convenient mounting.

The units are suitable for mounting on P.C. board.

■特長

- 消費電力が小(通常1 mA以下)
- 無接点構造のため、寿命は半永久的で電気雑音がなく回路への影響がゼロ
- 薄形(RCタイプ、ALタイプ)
- 広い再生周波数範囲
- 電話機リング音にも対応可

Features

- Low power consumption
- Long life and no-noise due to non-contact
- No magnetic field is generated
- Thin in thickness, and space saving
- High sound pressure level
- Covering wide frequency range

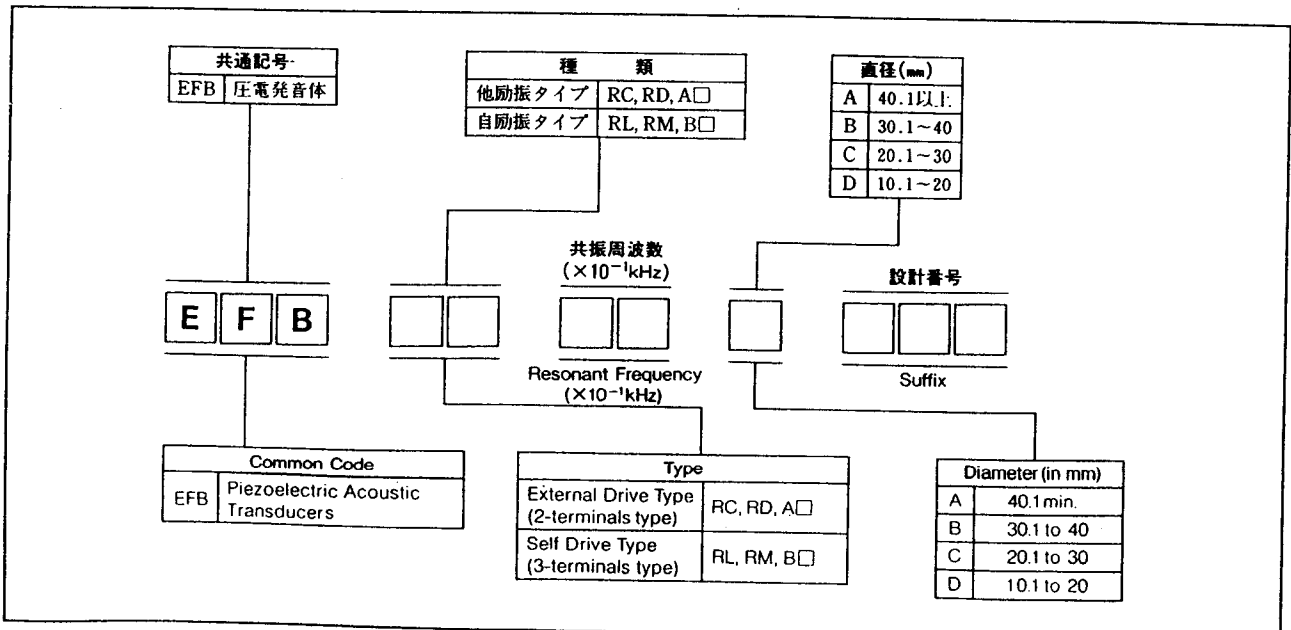
■用途

- 各種家庭用電子機器、時計、玩具などの報知音用
- 各種OA機器、電卓、カメラなどの確認音用
- ガス洩れ警報器、煙感知器、自動車電装品などの警報音用
- 電話器リング音用

Applications

- Home electric equipment, clock, toy etc
- OA equipment, calculator, camera etc
- For alarm.(Gas leakage detector, smoke detector etc.)
- For telephone ringer

■品番呼称法 Explanation of Part Numbers



■ 定格・性能 Ratings and Characteristics

2端子形・他励振タイプ

2-Terminals, External-Drive Type

| 品番 Part No. | 電圧感度 Sound Pressure Level (Measuring conditions) | 静電容量 Capacitance at 1 kHz | 最大許容入力電圧 Maximum Input Voltage |
|----------------|--|---------------------------------|--------------------------------------|
| EFBAA14D001 | 74 dB min. (15 Vp-p, 4 kHz Square wave, 10 cm) | 8500 pF | 25 Vp-p |
| EFBAA40D102 | 86 dB min. (15 Vp-p, 4 kHz Square wave, 10 cm) | 7000 pF | |
| EFBRD22C41/45 | 85 dB min. (15 Vp-p, 4 kHz Square wave, 10 cm) | 15000 pF | 30 Vp-p |
| EFBRD22C413 | 80 dB min. (15 Vp-p, 4 kHz Square wave, 10 cm) | 15000 pF | |
| EFBRD22C415 | 98 dB min. (15 Vp-p, 4 kHz Square wave, 10 cm) | 15000 pF | |
| EFBRD24C411 | 85 dB min. (15 Vp-p, 4 kHz Square wave, 10 cm) | 10000 pF | |
| EFBRC24C41B | 85 dB min. (15 Vp-p, 4 kHz Square wave, 10 cm) | 10000 pF | |
| EFBRD24C41 | 80 dB min. (15 Vp-p, 4 kHz Square wave, 10 cm) | 12000 pF | |
| EFBAF24C101 | 88 dB min. (15 Vp-p, 2.5 kHz Square wave, 10 cm) | 24000 pF | |
| EFBAL30D402* | 70 dB min. (15 Vp-p, 3 kHz Square wave, 10 cm) | 13000 pF | 25 Vp-p |

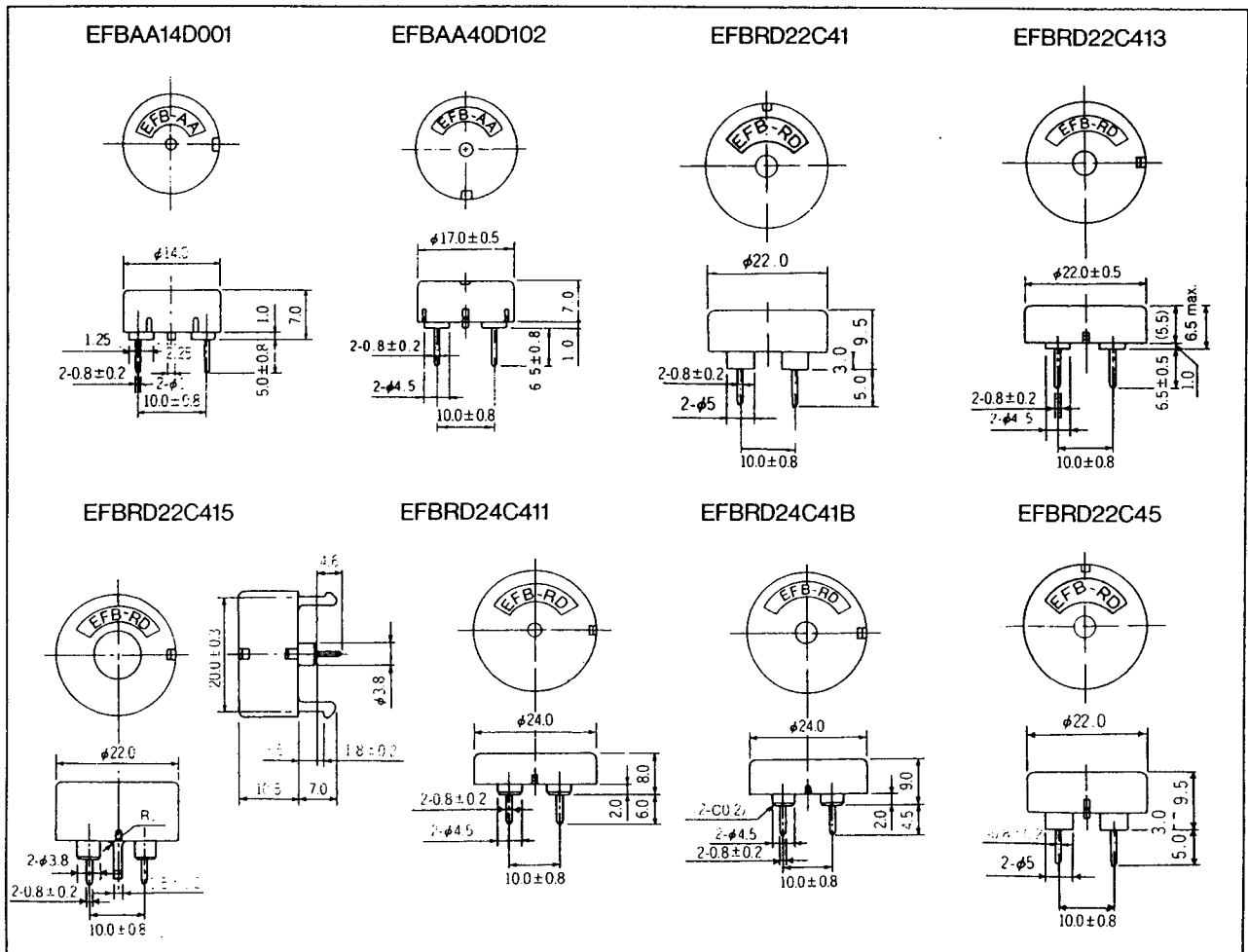
● Operating Temperature Range: -10 to 60 °C

● Storage Temperature Range: -20 to 70 °C

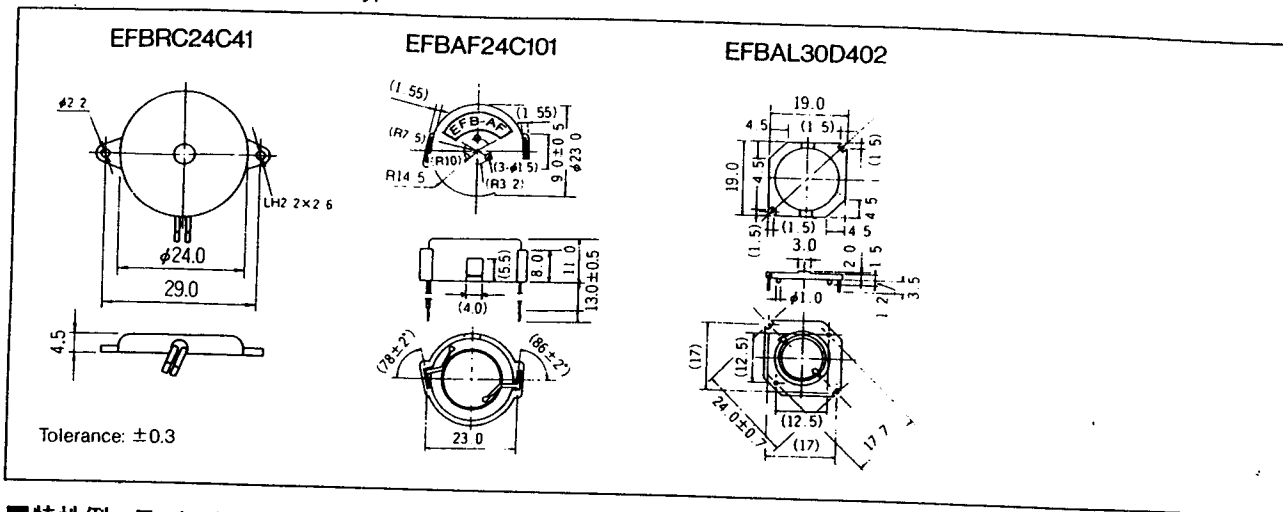
* For Telephone Ringer

■ 形状寸法図 Dimensions in mm(not to scale)

2-Terminals, External-Drive Type



■形状寸法図 Dimensions in mm(not to scale)
2-Terminals, External-Drive Type

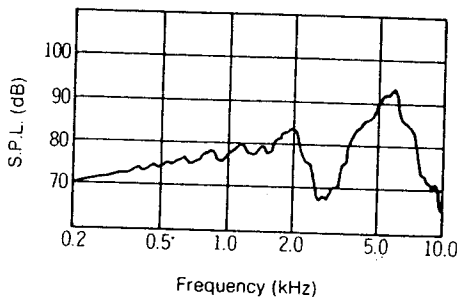


■特性例 Typical Characteristics

Frequency vs. Sound Pressure Level (External Drive Type)

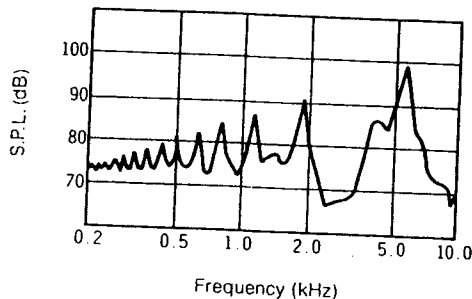
EFBAA14D001

Input voltage: 10 Vp-p, Square wave
Distance : 10 cm



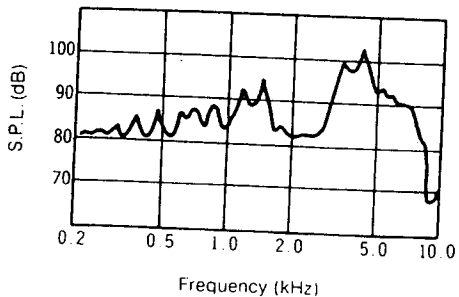
EFBAA40D102

Input voltage: 10 Vp-p, Square wave
Distance : 10 cm



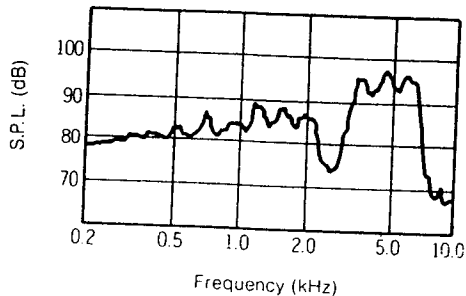
EFBRD22C411

Input voltage: 10 Vp-p, Square wave
Distance : 10 cm



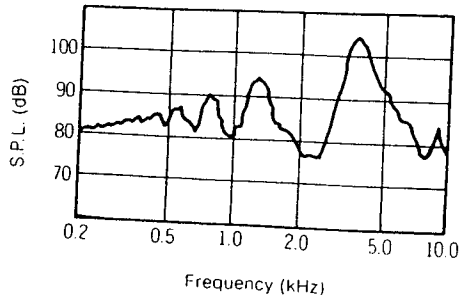
EFBRD22C413

Input voltage: 10 Vp-p, Square wave
Distance : 10 cm



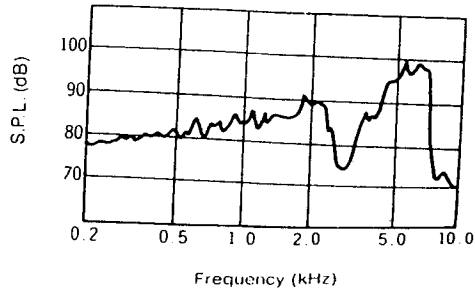
EFBRD22C415

Input voltage: 10 Vp-p, Square wave
Distance : 10 cm



EFBRC24C41

Input voltage: 10 Vp-p, Square wave
Distance : 10 cm



■ 定格・性能 Ratings and Characteristics

3端子形・自励振タイプ

3-Terminals, Self Drive Type

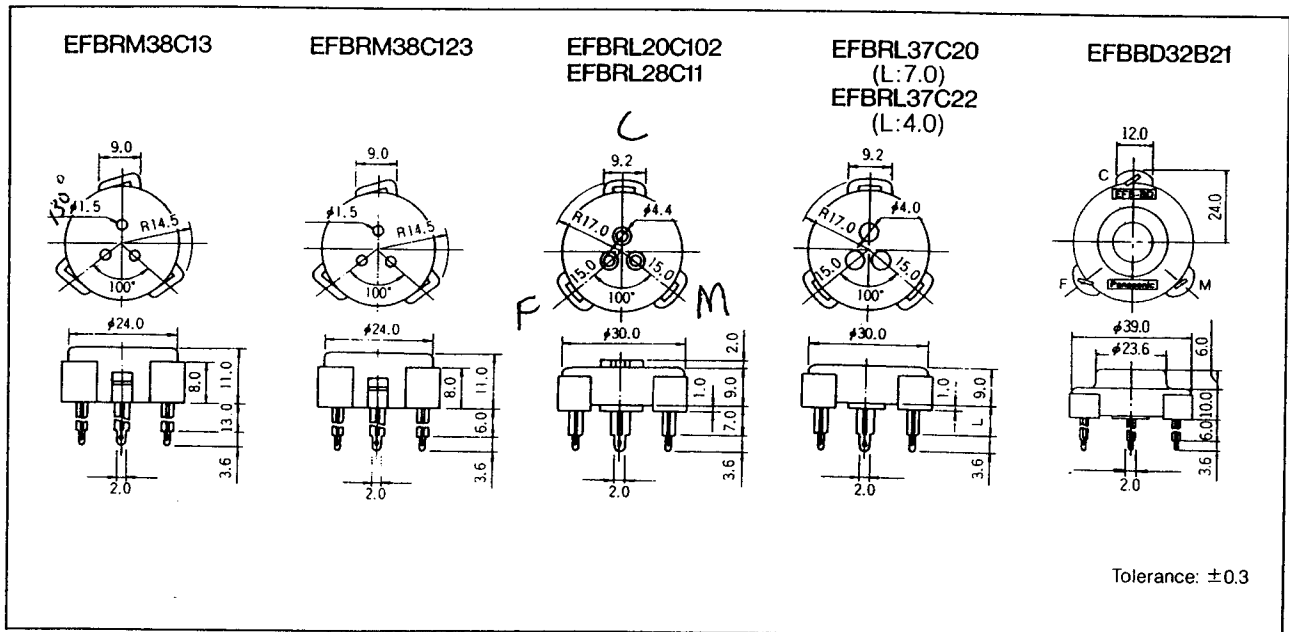
| 品番 Part No. | 出力レベル Sound Pressure Level (Measuring conditions) | 発振周波数 Oscillating Frequency | 駆動回路 Standard Driving Circuit |
|----------------|---|-----------------------------------|---|
| EFBRM38C13 | 90 dB min. (10 VDC, 10 cm) | 3.5±0.6 kHz | <ul style="list-style-type: none"> ● 下記測定回路による ● Cf. Test circuit diagram below |
| EFBRM38C123 | 90 dB min. (10 VDC, 10 cm) | | |
| EFBRL20C102 | 85 dB min. (12 VDC, 10 cm) | 2.0±0.4 kHz | |
| EFBRL28C11 | 98 dB min. (12 VDC, 10 cm) | 2.8±0.4 kHz | |
| EFBRL37C20/22 | 100/80 dB min. (12 VDC, 10 cm) | 3.9/3.7±0.5 kHz | |
| EFBBD32B21 | 106 dB min. (12 VDC, 10 cm) | 3.2±0.3 kHz | |

● Operating Temperature Range: -10 to 60 °C

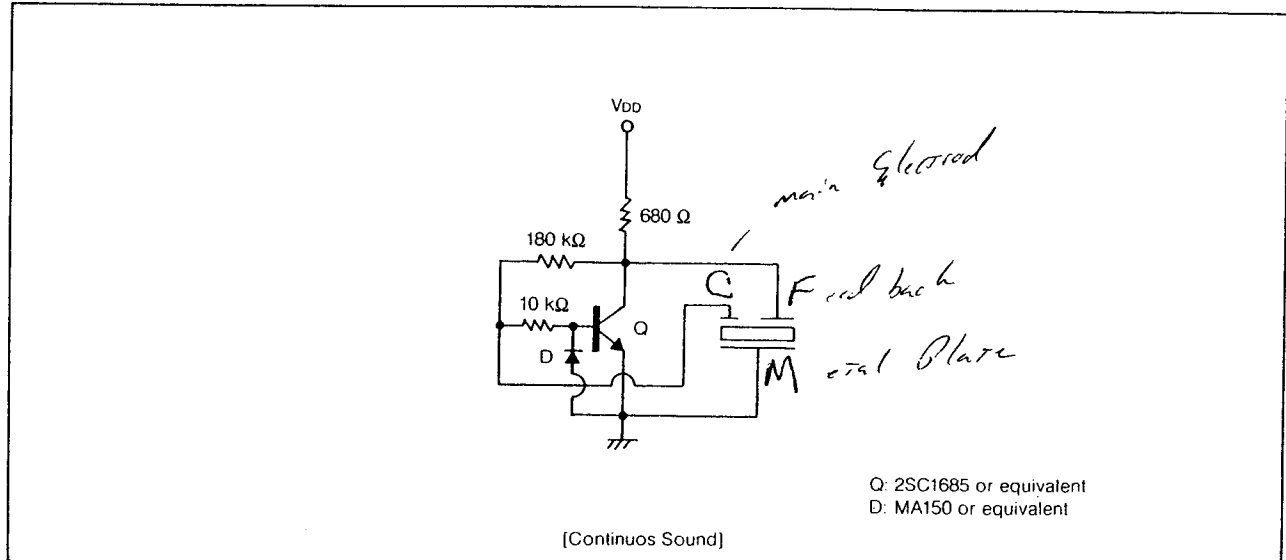
● Storage Temperature Range: -20 to 70 °C

■ 形状寸法図 Dimensions in mm (not to scale)

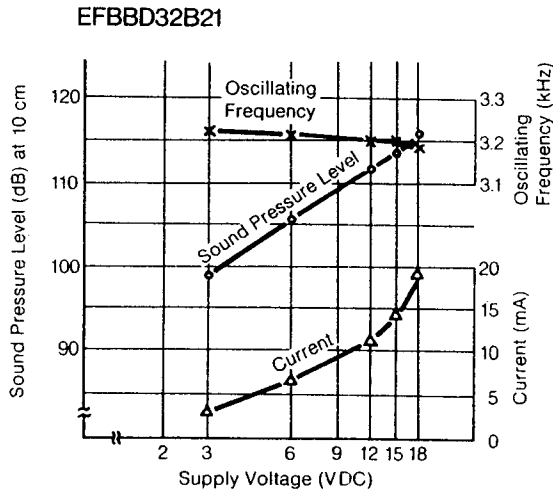
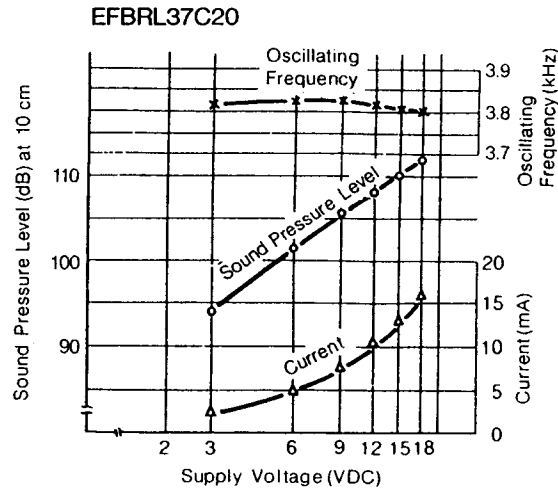
3-Terminals, Self-Drive Type



■ 測定回路 Test Circuit Diagram (for Self Drive Type)



Supply Voltage vs. Sound Pressure Level
(Self-Drive Type)



Temperature Characteristics
(Self-Drive Type)

