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# **Piezoelectric Sound Components**



## **Piezoelectric Sounders External Drive SMD Type**

Taking advantage of extensive acoustic and mechanical design technology and high performance ceramics, Murata has developed SMD piezoelectric sounders that suit the thin, high-density design of electronic equipment.

#### Features

- 1. Small, thin and lightweight
- 2. High sound pressure level and clear sound
- 3. Reflowable
- 4. Tape & Reel supply

PKLCS1212E2000-R1







Part Number	Sound Pressure Level (dB)	Operating Voltage Range (Vp-p)	Operating Temp. Range (°C)	Storage Temp. Range (°C)	Use
PKLCS1212E2000-R1	70 min.[3Vp-p,2kHz,square wave,10cm]	25 max.	-20 to +70	-30 to +80	For consumer electronics
PKLCS1212E20A0-R1	70 min.[3Vp-p,2kHz,square wave,10cm]	25 max.	-40 to +85	-40 to +85	For automotive electronics
PKLCS1212E4001-R1	75 min.[3Vp-p,4kHz,square wave,10cm]	25 max.	-20 to +70	-30 to +80	For consumer electronics
PKLCS1212E40A1-R1	75 min.[3Vp-p,4kHz,square wave,10cm]	25 max.	-40 to +85	-40 to +85	For automotive electronics

### Standard Land Pattern Dimensions



(in mm)



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#### ■ Freq. Response (Square Wave 3Vp-p, 10cm) PKLCS1212E2000-R1 PKLCS1212E4001-R1 100 100 Input Voltage : 3.00Vp-p Squar Distance : 10cm Input Voltage : 3.00Vp-p Squa Distance : 10cm 90 90 Sound Pressure Level (dB) Sound Pressure Level (dB) 80 80 70 70 60 60 50 50 40 ∟ 1.0 40 ∟ 1.0 5.5 5.5 2.5 6.0 1.5 2.5 6.0 2.0 5.0 2.0 4.5 5.0 1.5 3.0 3.5 4.5 3.0 3.5 4.0 4.0 Frequency (kHz) Frequency (kHz) Taping Dimension **Dimensions of Carrier Tape Dimensions of Reel** 4.0±0.1 1.75±0.1 ø1.50<sup>+0.1</sup>-0.0 2.0±0.1 Trailer 160–200 Components Cover Film -<del>0</del>--0 -4 <u>-</u>ф 11.5±0.1

12.5±0.1

3.1±0.1

24.0±0.2

 $\mathbf{A}$ 

The cover film peel strength force 0.1–0.7N The cover film peel speed 300mm/min.

<u>/10</u>>>

Cover Film

Direction of Feed

16.0±0.1

12.5±0.1

(ø80) (ø330)

25.5±0.5 33.5 max. 2.2±0.2

13.0±0.2

240-280

Empty

400-560 Leader

(in mm)



ANote • This PDF catalog is downloaded from the website of Murata Manufacturing co., Itd. Therefore, it's specifications are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering.
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### Piezoelectric Sounders (External Drive SMD Type) Circuit/Notice

#### Circuit





#### ■ Notice (Soldering and Mounting)

Washing of the component is not acceptable, because it is not sealed.

#### ■ Notice (Handling)

- 1. The component may be damaged if mechanical stress exceeding specifications is applied.
- 2. Take care to protect operating circuit from surge voltage resulting from excessive force, falling, shock or temperature change.
- If DC voltage is applied to the component, silver migration may occur. Please pay full attention to avoid subjecting the component to DC voltage for long periods.
- The resistor should be used as shown in Fig. A. A suitable resistance value should be chosen, preferably 1kΩ to 2kΩ. Instead of this measure, a diode may also be applied as shown in Fig. B.



Avoid excessive pulling of lead wire because wire may break or soldering point may come off.



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	ounders/Piezoelectric Buzzers/Piezoele	ctric
art Number)	PK M 13 E P YH 40 00 P <b>0 2 3 4 5 6 7 8 9</b>	-A0
Product ID		
Product ID		
PK	Piezoelectric Sound Components	_
Product		
Code	Product	
М	Sounder, Ringer	_
В	Buzzer	_
Outer Dimensio		
(.) Code	e Outer Dimensions	_
13	ø12.6mm	_
Drive		
Code	Drive	
E	External-Drive	_
S	Self-Drive	_
Outer Electrode	e Style	
Code	Outer Electrode Style	-
Р	Pin Type	_
W	Lead Wire Type	_
Structure Code	Structure	-
T	Standing Type	-
P	Flat Type Auto-assemble	_
Υ□	Flat Type/Available for Taping	
C□	Flat Type/Semi-auto-assemble	
	Exclude above mentioned	_
means specifica	tion of outer electrode.	
MD Piezoelec		
art Number)	PK         LCS         1212         E         40         01         -R1           Image: Comparison of the second se	
Product ID		_
Product ID		
Product ID PK	Piezoelectric Sound Components	_
	Piezoelectric Sound Components	_
PK	Piezoelectric Sound Components Product	_
<b>PK</b> Product	· · ·	
PK Product Code	Product	_
PK Product Code LCS	Product	-

#### 4 Drive

Code	Drive
E	External Drive

#### Scillating Frequency Type

(PIEZORINGER®)

Code	Oscillating Frequency Type	
40	Expressed resonant frequency by two-digit alphanumerics. The unit is in 100 hertz (Hz). In case of 4kHz (4000Hz), expressed as "40".	

#### ndividual Specification Code

Code	Individual Specification Code
00	Two digits express custom specification in characteristics.

#### pecial Quality Guarantee

Code	Special Quality Guarantee	
Р	Post Plated Terminal	
_	Blank	

#### ackaging

Code	Packaging
-B0	Bulk
-A0	Radial Taping
-M0	Magazine

lial taping or magazines are not available for all types. ase contact us.

kaging Code is blank in the case of types for which radial taping or azines are not available.

#### Scillating Frequency Type

Code	Oscillating Frequency Type	
40	Expressed resonant frequency by two-digit alphanumerics. The unit is in 100 hertz (Hz). In case of 4kHz (4000Hz), expressed as "40".	

#### ndividual Specification Code

Code	Individual Specification Code
01	Two digits express specific specification in characteristics.

#### Packaging

- 00	
Code	Packaging
-R1	Plastic taping





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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