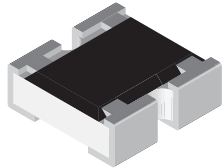


Thick Film Chip Attenuator, Surface Mount, Balanced π Type



FEATURES

- Single component reduces board space and component counts - replaces 3 or more components
- Tolerance matching and temperature tracking superior to individual components
- Maximum power dissipation: 0.075 W for CZB06S
- Consult factory for extended values, non-standard tolerances, impedance matching and other attenuation values
- Frequency range: DC to 3 GHz
- Surface mount chip attenuator in a resistor array package
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



Note

* This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information/tables in this datasheet for details.

STANDARD ELECTRICAL SPECIFICATIONS

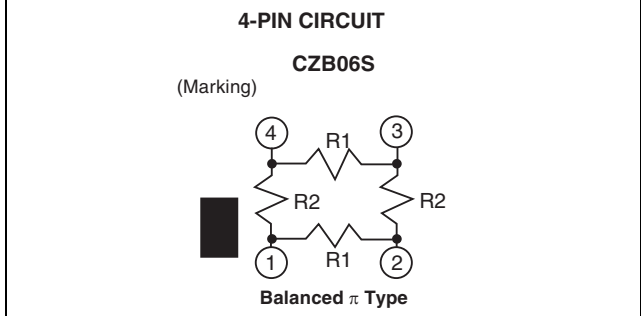
| GLOBAL MODEL | POWER RATING $P_{70\text{ }^\circ\text{C}}$ W | IMPEDANCE Ω | ATTENUATION RANGE AND TOLERANCE | |
|--------------|--|-----------------------|---------------------------------|-------------------------|
| | | | $\pm 0.3\text{ dB (L)}$ | $\pm 0.5\text{ dB (H)}$ |
| CZB06S | 0.075 | 50/75 | 0 dB, 1 dB to 5 dB | 6 dB to 10 dB |

Note

- Power rating depends on the maximum temperature at the solder point, the component placement density and the substrate material.

| IMPEDANCE | 50 Ω | 75 Ω |
|----------------------------------|-------------|-------------|
| Attenuation in dB ⁽¹⁾ | 1 | 1 |
| | 1.5 | 1.5 |
| | 2 | 2 |
| | 3 | 3 |
| | 4 | 4 |
| | 5 | 5 |
| | 6 | 6 |
| | 10 | 10 |

CIRCUIT SCHEMATIC



Note

⁽¹⁾ Consult factory for other attenuations.

TECHNICAL SPECIFICATIONS

| PARAMETER | UNIT | CZB06S |
|--|------------------|-------------|
| Rated dissipation at 70 $^\circ\text{C}$ | W | 0.075 |
| VSWR | | 1.2 max. |
| Category temperature range | $^\circ\text{C}$ | -55 to +150 |
| Frequency range | | DC to 3 GHz |

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CZB06S04020050LRT (preferred part numbering format)



| MODEL | PIN COUNT | ATTENUATION | IMPEDANCE | TOLERANCE | PACKAGING | SPECIAL |
|--------|------------|---|--|--|--|--|
| CZB06S | 04 = 4 pin | 010 = 1.0 dB 015 = 1.5 dB 020 = 2.0 dB 100 = 10.0 dB 000 = 0 dB | 050 = 50 Ω 075 = 75 Ω | H = $\pm 0.5\text{ dB}$ L = $\pm 0.3\text{ dB}$ | EA = Lead (Pb)-free, T/R RT = Tin lead, T/R | (Dash number) Up to 1 digit Blank = Standard |

Note

- For additional information on packaging, refer to the Surface Mount Network Packaging document (www.vishay.com/doc?31540).

DIMENSIONS

4-Terminal device

S - Version



| GLOBAL MODEL | DIMENSIONS in inches (millimeters) | | | | | | |
|--------------|------------------------------------|--------------------------------|--------------------------------|--------------------------------|-----------------|--------------------------------|--------------------------------|
| | L | W | T | A | P | B | B* |
| CZB06S | 0.063 ± 0.006 (1.60 ± 0.15) | 0.059 ± 0.006 (1.50 ± 0.15) | 0.020 ± 0.004 (0.51 ± 0.10) | 0.024 ± 0.006 (0.61 ± 0.15) | 0.031 (0.80) | 0.012 ± 0.006 (0.30 ± 0.15) | 0.012 ± 0.006 (0.30 ± 0.15) |

| GLOBAL MODEL | SOLDER PAD DIMENSIONS in inches (millimeters) | | | | |
|--------------|---|--------------|--------------|--------------|--------------|
| | c | w | d | a | b |
| CZB06S | 0.031 (0.80) | 0.122 (3.10) | 0.014 (0.36) | 0.025 (0.63) | 0.045 (1.15) |



| PERFORMANCE | | | |
|--|---|----------------------------------|---------------|
| TEST | CONDITIONS OF TEST | TEST RESULTS (TYPICAL TEST LOTS) | |
| | | 0.5 dB to 5 dB | 6 dB to 10 dB |
| Endurance test at 70 °C per EIA 575-3.14 | 1000 h at 70 °C, 1.5 h "ON", 0.5 h "OFF" | ± 0.2 dB | ± 0.3 dB |
| Overload per EIA 575-3.6 | Short time overload | ± 0.2 dB | ± 0.3 dB |
| Thermal shock | Per EIA 575-3.5 | ± 0.2 dB | ± 0.3 dB |
| Moisture resistance | Per EIA 575-3.10 | ± 0.2 dB | ± 0.3 dB |
| Resistance to soldering heat | 10 s at 260 °C solder bath temperature EIA 575 3.8 | ± 0.2 dB | ± 0.3 dB |
| High temperature exposure | Per EIA 575-3.7 | ± 0.2 dB | ± 0.3 dB |
| Low temperature operations | Per EIA-575-3.6 | ± 0.2 dB | ± 0.3 dB |
| Solderability and leaching | EIA 575-3.12 | 95 % coverage | |



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.



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

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.