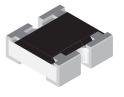


Thick Film Chip Attenuator, Surface Mount, Balanced  $\pi$  Type



# **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 RoHS
  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 <u>www.vishay.com/doc?99912</u>

### Note

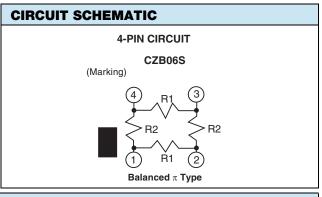
<sup>\*</sup> This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information/tables in this datasheet for details.

STANDARD ELECTRICAL SPECIFICATIONS					
GLOBAL MODEL	POWER RATING P70 °C	IMPEDANCE Ω	ATTENUATION RANGE AND TOLERANCE		
	W		± 0.3 dB (L)	± 0.5 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
	1	1
	1.5	1.5
	2	2
Attenuation in dB <sup>(1)</sup>	3	3
Attenuation in dB (1)	4	4
	5	5
	6	6
	10	10



## Note

<sup>(1)</sup> Consult factory for other attenuations.

TECHNICAL SPECIFICATIONS					
PARAMETER	UNIT	CZB06S			
Rated dissipation at 70 °C	W	0.075			
VSWR		1.2 max.			
Category temperature range	°C	-55 to +150			
Frequency range		DC to 3 GHz			

## **GLOBAL PART NUMBER INFORMATION**

New Global Part Numbering: CZB06S04020050LRT (preferred part numbering format)					
CZB	0 6 S 0	4 0 2	2 0 0	5 0 L R	T
MODEL PIN COUN	ATTENUATION	IMPEDANCE	TOLERANCE	PACKAGING	SPECIAL
<b>CZB06S</b> 04 = 4 pin	010 = 1.0 dB 015 = 1.5 dB	<b>050</b> = 50 Ω <b>075</b> = 75 Ω	$H = \pm 0.5 dB$ $L = \pm 0.3 dB$	<b>EA</b> = Lead (Pb)-free, T/R <b>RT</b> = Tin lead, T/R	(Dash number) Up to 1 digit
	<b>020</b> = 2.0 dB <b>100</b> = 10.0 dB <b>000</b> = 0 dB				Blank = Standard

#### Note

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

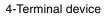
Revision: 14-May-14

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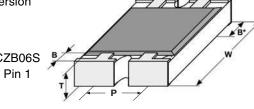
**CZB** Vishay Dale

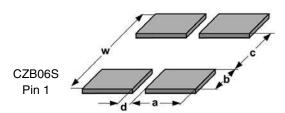
# DIMENSIONS



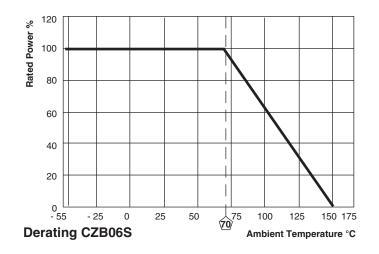
S - Version







GLOBAL	DIMENSIONS in inches (millimeters)						
MODEL	L	w	т	Α	Р	В	B*
CZB06S	$\begin{array}{c} 0.063 \pm 0.006 \\ (1.60 \pm 0.15) \end{array}$	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)	$\begin{array}{c} 0.012 \pm 0.006 \\ (0.30 \pm 0.15) \end{array}$	$\begin{array}{c} 0.012 \pm 0.006 \\ (0.30 \pm 0.15) \end{array}$
GLOBAL SOLDER PAD DIMENSIONS in inches (millimeters)							
MODEL	С		w	d	а		b
CZB06S	0.031 (0.80)	0.12	2 (3.10)	0.014 (0.36)	0.025 (0	).63)	0.045 (1.15)



PERFORMANCE					
TEST	CONDITIONS OF TEST	TEST RESULTS (	TEST RESULTS (TYPICAL TEST LOTS)		
	CONDITIONS OF TEST	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	soldering heat 10 s at 260 °C solder bath temperature EIA 575 3.8		± 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				



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