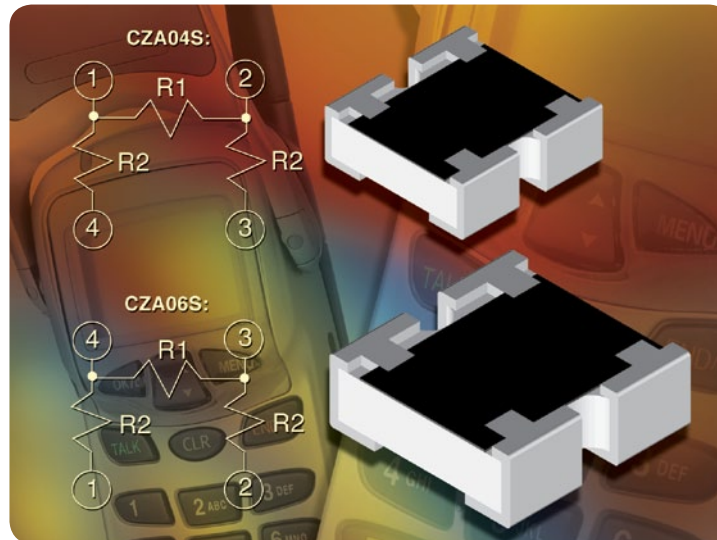


## Thick Film Chip Resistor Attenuator, Surface Mount



### KEY BENEFITS

- Single component reduces board space and component count
- Tolerance matching and temperature tracking superior to individual components
- Specific impedance and attenuation in an unbalanced  $\pi$ -type configuration
- Frequency range to 3 GHz DC

### APPLICATIONS

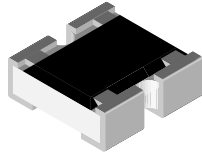
- RF signal attenuation
- Cell phones
- Mobile and hand-held equipment
- Power “step-down” applications

### RESOURCES

- Datasheet: CZA - <http://www.vishay.com/doc?31061>
- For technical questions contact [ff2aresistors@vishay.com](mailto:ff2aresistors@vishay.com)



## Thick Film Chip Resistor Attenuator, Surface Mount



### 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 CZA06S; 0.040 W for CZA04S
- Consult factory for extended values, non-standard tolerances, impedance matching and other attenuation values
- Frequency range: DC to 3 GHz
- Compliant to RoHS directive 2011/65/EU


**RoHS\***  
COMPLIANT

### STANDARD ELECTRICAL SPECIFICATIONS

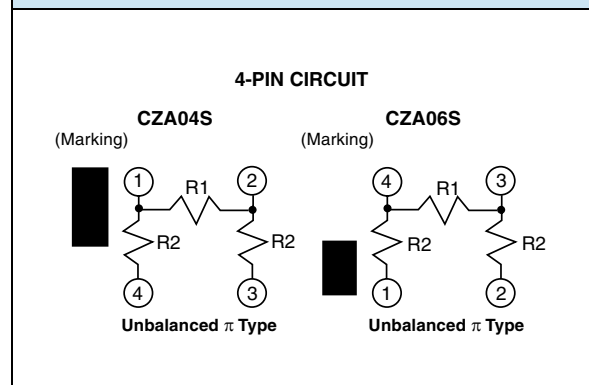
GLOBAL MODEL	POWER RATING $P_{70^\circ\text{C}}$ W	IMPEDANCE $\Omega$	ATTENUATION RANGE AND TOLERANCE	
			$\pm 0.3$ dB (L)	$\pm 0.5$ dB (H)
CZA04S	0.040	50	1 dB to 5 dB	6 dB to 20 dB
CZA06S	0.075	50/75/100/300/600	1 dB to 5 dB	6 dB to 20 dB

**Note**

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

IMPEDANCE	50 $\Omega$	75 $\Omega$	100 $\Omega$	300 $\Omega$	600 $\Omega$
1	1	1	1	1	1
1.5	1.5	1.5	1.5	1.5	1.5
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
10	10	10	10	10	10
11	11	11	11	11	11
12	12	12	12	12	12
13	13	13	13	13	13
14	14	14	14	14	14
15	15	15	15	15	15
16	16	16	16	16	16
17	17	17	17	17	17
18	18	18	18	18	18
19	19	19	19	19	19
20	20	20	20	20	20

### CIRCUIT SCHEMATIC



### TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CZA04S	CZA06S
Rated dissipation at 70 °C	W	0.040	0.075
VSWR		1.2 max.	1.2 max.
Category temperature range	°C	- 55 to + 125	- 55 to + 150
Frequency range		DC to 3 GHz	DC to 3 GHz

### GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CZA06S04015050LRT (preferred part numbering format)

C	Z	A	0	6	S	0	4	0	1	5	0	5	0	L	R	T	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--

MODEL	PIN COUNT	ATTENUATION	IMPEDANCE	TOLERANCE	PACKAGING	SPECIAL
CZA04S CZA06S	04 = 4 pin	010 = 1.0 dB 015 = 1.5 dB 020 = 2.0 dB 150 = 15.0 dB 000 = 0 $\Omega$ Jumper	050 = 50 $\Omega$ 075 = 75 $\Omega$ 100 = 100 $\Omega$ 000 = 0 $\Omega$ Jumper	H = $\pm 0.5$ dB L = $\pm 0.3$ dB Z = 0 $\Omega$ Jumper	EA = Lead (Pb)-free, T/R (all) TD = Tin lead, T/R (04 only) RT = Tin lead, T/R (06 only)	(Dash number) Up to 1 digit Blank = Standard

Historical Part Number Example: CZA06S04015050LRT (will continue to be accepted)

CZA	06S	04	015	050	L	RT
MODEL	CASE SIZE	PIN COUNT	ATTENUATION	IMPEDANCE	TOLERANCE	PACKAGING

Revision 27-Apr-10

\* Pb containing terminations are not RoHS compliant, exemptions may apply