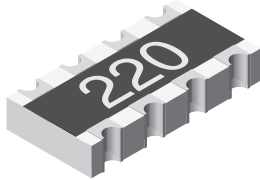# CRA06P

Vishay Dale

VISHAY®

Thick Film Resistor Array

CRA06P Thick Film resistor array is constructed on a high grade ceramic body with concave terminations. A small package enables the design of high density circuits. The single component reduces board space, component counts and assembly costs.

FEATURES

- Concave terminal array with square corners
- 8 terminal package with isolated resistors
- Wide ohmic range: 10R to 1M0
- Lead (Pb)-free solder contacts on Ni barrier layer
- Pure tin plating provides compatibility with Lead (Pb)-free and lead containing soldering processes
- Compatible with "Restriction of the use of Hazardous Substances" (RoHS) directive 2002/95/EC (issue 2004)
- Operating temperature range of -55°C to +150°C

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING $P_{70°C}$ W	CIRCUIT	LIMITING ELEMENT VOLTAGE MAX. $V\cong$	TEMPERATURE COEFFICIENT ppm/K	TOLERANCE %	RESISTANCE RANGE Ω	E-SERIES
CRA06P	0.0625	03	50	200	± 2; ± 5	10R - 1M0	24
				100	± 1	10R - 1M0	24 - 96

Jumper: Zero-Ohm-Resistor available; R ≤ 50m Ω

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CRA06P 03 CIRCUIT
Rated Dissipation at 70°C	W	0.0625
Limiting Element Voltage [1]	$V\cong$	50
Insulation Voltage (1min)	$V_{dc/ac\ peak}$	100
Category Temperature Range	°C	- 55 to + 150
Insulation Resistance	Ω	> 10^{10}

1) Rated voltage: $\sqrt{P*R}$

PART NUMBER AND PRODUCT DESCRIPTION

PART NUMBER: CRA06P08310K0JTA

| C | R | A | 0 | 6 | P | 0 | 8 | 3 | 1 | 0 | K | 0 | J | T | A | | |

MODEL	TERMINAL STYLE	PIN	CIRCUIT	VALUE	TOLERANCE	PACKING	SPECIAL
CRA06	**P**	**08**	**3** = 03	**R** = Decimal **K** = Thousand **M** = Million **0000** = 0Ω Jumper	**F** = ± 1% **G** = ± 2% **J** = ± 5% **Z** = 0Ω Jumper	**TA** = RT1 **TC** = RT6	up to 2 digits

PRODUCT DESCRIPTION: CRA06P 08 03 473 J RT1 e3

CRA06P	08	03	473	J	RT1	e3
MODEL	TERMINAL COUNT	CIRCUIT TYPE	RESISTANCE VALUE	TOLERANCE	PACKING[1]	LEAD (Pb)-FREE
CRA06P	08	03	473 = 47KΩ 4702 = 47KΩ 10R0 = 10Ω 100 = 10Ω **000** = 0Ω Jumper	F = ± 1% G = ± 2% J = ± 5% Z = 0Ω Jumper	RT1 RT6	e3 = Pure Tin Termination Finish
			First two digits (three for 1 %) are significant. Last digit is the multiplier			

1) Please refer to table PACKING, page 10.

NOTE: Products can be ordered using either the Product Description or the Part Number.

DIMENSIONS

4-Resistor Device
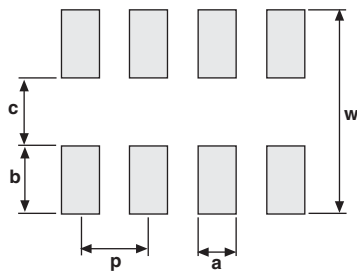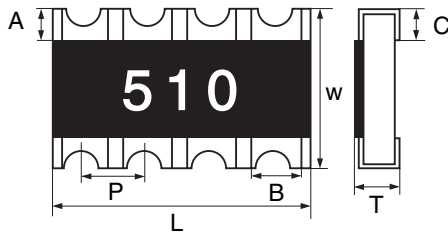
PIN NO#	DIMENSIONS [in millimeters]						
	L	A	B	C	P	T	W
8	3.20	0.30	0.40	0.40	0.80	0.60	1.6
Tol	± 0.20	± 0.20	± 0.15	± 0.20	-	± 0.10	± 0.15

SOLDER PAD DIMENSIONS [in millimeters]					
	c	w	p	a	b
WAVE	0.8	2.6	0.8	0.4	0.9

DESCRIPTION

Production is strictly controlled and follows a set of instructions established for reproducibility. A thick film layer is deposited on a high grade ceramic substrate. The resistor elements are covered by a protective coating designed for electrical, mechanical and climatic protection. The wrap around terminations receive a final pure tin on nickel plating.

The result of the determined production is verified by an extensive testing procedure. Only accepted products are laid directly into the paper tape in accordance with **EIA 481.**

ASSEMBLY

The resistors are suitable for processing on automatic SMD assembly systems. They are suitable for automatic soldering using wave and solder paste reflow. Due to the design, arrays have automatic placement capability. The resistors are Lead (Pb)-free, the pure tin plating provides compatibility with Lead (Pb)-free and Lead-containing soldering processes. All products comply with the CEFIC-EECA-EICTA list of legal restrictions on hazardous substances.
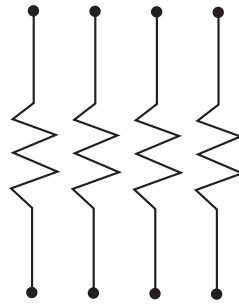
This includes full compatibility with the following directives:

• 2000/53/EC End of Vehicle Life Directive (ELV)

• 2000/53/EC Annex II to End of Vehicle Life Directive (ELV II)

• 2002/95/EC Restriction of the use of Hazardous Substances Directive (RoHS)

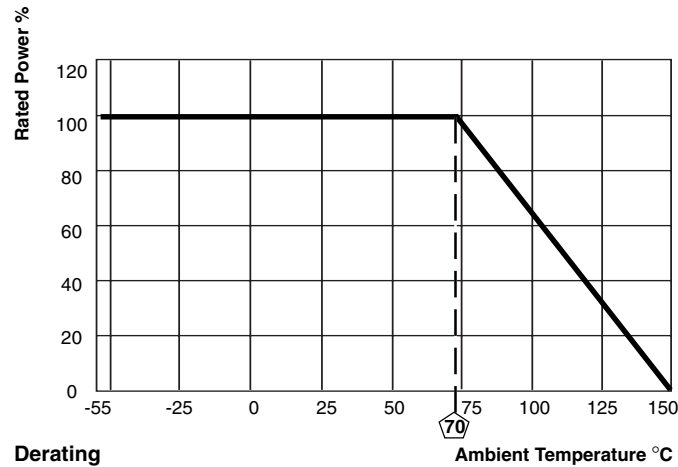• 2002/96/EC Waste Electrical and Electronic Equipment Directive (WEEE)

Solderability is specified for 2 years after production or re-qualification. The permitted storage time is 20 years.

CRA06P

Vishay Dale

Thick Film, Resistor Array

VISHAY.

CIRCUIT

03 Circuit

8-pin

Derating

Rated Power %

Ambient Temperature °C

PACKING					
MODEL	**TAPE WIDTH**	**DIAMETER**	**PIECES**	**PITCH**	**PACKING CODE**
					PAPER TAPE
CRA06P	8 mm	180 mm/7"	5 000	4 mm	RT1
	8 mm	330 mm/13"	20 000	4 mm	RT6

For Technical Questions, contact: ff3aresistors@vishay.com

PERFORMANCE

TEST	CONDITIONS OF TEST	TEST RESULTS
Endurance Test at 70°C per EIA 575-3.14	1000 hours at 70°C, 1.5 hours "ON", 0.5 hours "OFF"	± 1.0 %
Overload per EIA 575-3.6	Short time overload	± 0.5 %
Thermal Shock	per EIA 575-3.5	± 0.5 %
Moisture Resistance	per EIA 575-3.10	± 1.0 %
Resistance to Soldering Heat EIA 575 3.8	10 seconds at 260°C solder bath temperature	± 1.0 %
High Temperature Exposure	per EIA 575-3.7	± 1.0 %
Low Temperature Operation	per EIA-/ IS-30A-3.6	± 0.5 %
Solderability & Leaching	EIA 575-3.12	95 % Coverage