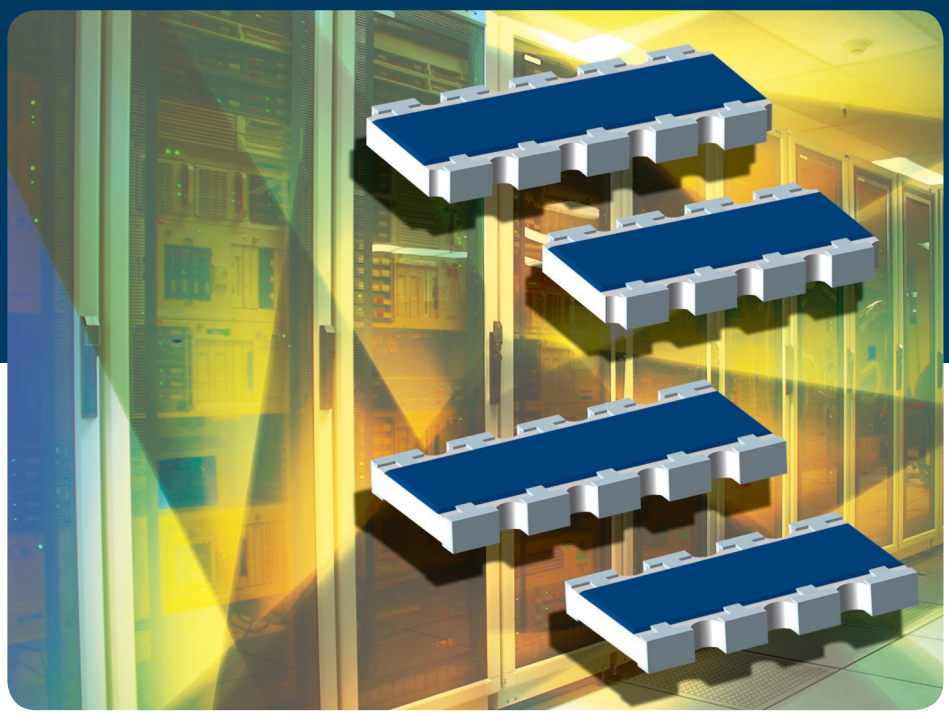
THICK FILM RESISTOR/CAPACITOR ARRAY

CRCA12E, CRCA12S



RESISTIVE PRODUCTS

PRODUCT SHEET

Surface-Mount Thick Film Resistor/Capacitor Array

KEY BENEFITS

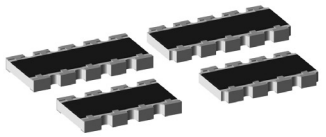
- Single component reduces board space and component count
- Processing speed and space reduction superior to individual components
- Provides a circuit solution within limited real estate constraints

APPLICATIONS

- Computer boards
- High-speed processing applications

Datasheet is available on our web site at www.vishay.com
for CRCA12E, CRCA12S - http://www.vishay.com/doc?31044

Thick Film Array, Resistor/Capacitor



FEATURES

- Single component reduces board space and component counts
- Choice of dielectric characteristics X7R or Y5U
- Wrap around termination
- Thick film R/C element
- Inner electrode protection
- Flow & Reflow solderable
- Automatic placement capability, standard size
- 8 or 10 pin configurations
- Lead (Pb)-Free version is RoHS Compliant

Pb Available

e3 RoHS* COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	RESISTOR				CAPACITOR				
	POWER RATING $P_{70°C}$ W	TEMPERATURE COEFFICIENT ppm/°C	TOLERANCE %	VALUE RANGE Ω	DIELECTRIC	TEMPERATURE COEFFICIENT %	TOLERANCE %	VOLTAGE RATING VDC	VALUE RANGE pF
CRCA12E CRCA12S	0.125	200	5	10R – 1M0	X7R	± 15	20	50	10 - 270
CRCA12E CRCA12S	0.125	200	5	10R – 1M0	Y5U	+ 20, - 56	20	50	270 -1800

RESISTOR
- Operating Temperature Range: - 55°C to + 125°C
- Technology: Thick Film

CAPACITOR
- Operating Temperature Range: X7R - 55°C to + 125°C; Y5U - 30°C to + 85°C
- Maximum Dissipation Factor: 2.5%
- Dielectric Withstanding Voltage: 125V_{dc}, 5 sec, 50mA Charge

- Ask about extended value ranges
- Packaging: according to EIA 481
- Power rating depends on the max. temperature at the solder point, the component placement density and the substrate material

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR	X7R CAPACITOR	Y5U CAPACITOR
Rated Dissipation at 70°C (CECC 40401 I EIA 575)	W	0.125	–	–
Capacitor Voltage Rating	V	–	50	50
Dielectric Withstanding Voltage (5 sec, 50mA Charge)	V_{dc}	–	125	125
Category Temperature Range	°C	- 55 / + 155	- 55 / + 125	- 30 / + 85
Insulation Resistance	Ω		$> 10^{10}$	

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CRCA12E081472220R (preferred part numbering format)

C	R	C	A	1	2	E	0	8	1	4	7	2	2	2	0	R	

MODEL	PIN COUNT	SCHEMATIC	RESISTANCE VALUE	CAPACITANCE VALUE	PACKAGING	SPECIAL
CRCA12E **CRCA12S**	**08** = 8 Pin **10** = 10 Pin	**1** = 01 **2** = 02 **3** = 03 **0** = Special	2 digit significant figure, followed by a multiplier **100** = 10Ω **683** = 68KΩ **105** = 1.0MΩ (Tolerance = ± 5%)	2 digit significant figure, followed by a multiplier **100** = 10pF **271** = 270pF **182** = 1800pF (Tolerance = ± 20%)	**E** = Lead Free, T/R (2000pcs) **R** = Tin/Lead, T/R (2000pcs)	(Dash Number) (up to 1 digit) Blank = Standard

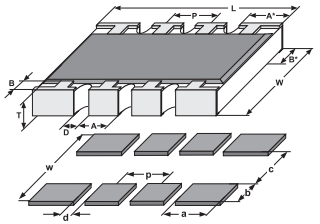
Historical Part Number example: CRCA12E0801472J220MRB8 (will continue to be accepted)

CRCA12E	08	01	472	J	220	M	RB8
MODEL	PIN COUNT	SCHEMATIC	RESISTANCE VALUE	TOLERANCE	CAPACITANCE VALUE	TOLERANCE	PACKAGING

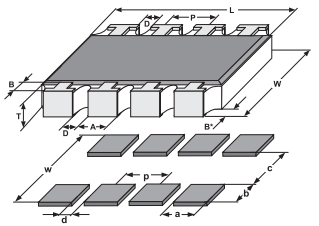
Revision 05-Oct-05

DIMENSIONS

8-Terminal device S-Version



E-Version



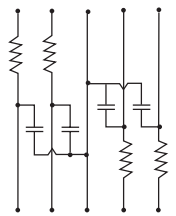
GLOBAL MODEL	PIN NO#	SIZE		DIMENSIONS [in millimeters]								
		INCH	METRIC	L	W	T	B	B*	A	A*	D_{NOM}	P_{NOM}
CRCA12E	8	2012	5032	5.1 ± 0.15	3.05 ± 0.15	0.61 ± 0.10	0.51 ± 0.25	0.38 ± 0.2	0.79 ± 0.15	–	0.25	1.27
CRCA12S	8	2012	5032	5.1 ± 0.15	3.05 ± 0.15	0.61 ± 0.10	0.51 ± 0.25	0.38 ± 0.2	0.79 ± 0.15	0.89 ± 0.15	0.25	1.27
CRCA12E	10	2512	6432	6.4 ± 0.15	3.05 ± 0.15	0.61 ± 0.10	0.51 ± 0.25	0.38 ± 0.2	0.79 ± 0.15	–	0.25	1.27
CRCA12S	10	2512	6432	6.4 ± 0.15	3.05 ± 0.15	0.61 ± 0.10	0.51 ± 0.25	0.38 ± 0.2	0.79 ± 0.15	0.89 ± 0.15	0.25	1.27

SOLDER PAD DIMENSIONS [in millimeters]											
WAVE SOLDERING						REFLOW SOLDERING					
c	w	d	p	a	b*	c	w	d	p	a	b*
2.2	4.3	0.57	1.27	0.71	1.05	2.2	3.9	0.57	1.27	0.71	0.86

* For layouts to accept both the edge type and pull through type terminations add 0.25mm to the b-dimension and c = 1.7mm

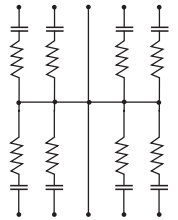
PERFORMANCE: see CRCC1206

01 Circuit CRCA12E & S



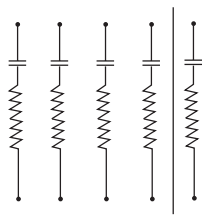
10 Pin only

02 Circuit CRCA12E & S



10 Pin only

03 Circuit CRCA12E & S



8 Pin 10 Pin