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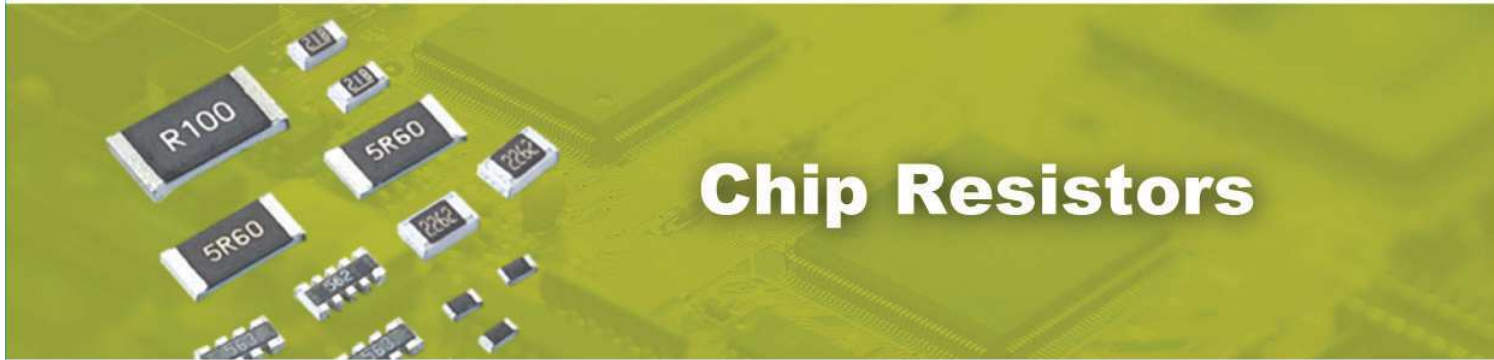
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





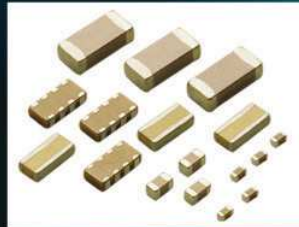


華新科技股份有限公司  
Walsin Technology Corporation



# Chip Resistors

# 2012

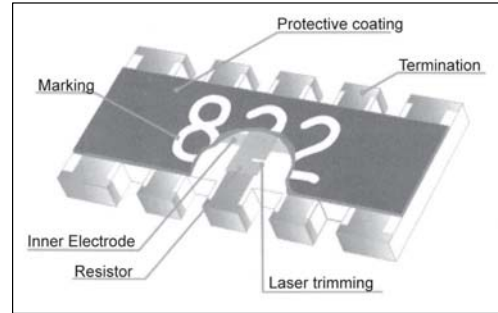


## WT04X Chip Resistor Network 10P8R

### Description

The resistor array is constructed in a high grade ceramic body (aluminum oxide). Internal metal electrodes are added at each end and connected by a resistive paste that is applied to the top surface of the substrate. The composition of the paste is adjusted to give the approximate resistance required and the value is trimmed to within tolerance by laser cutting of this resistive layer.

The resistive layer is covered with a protective coat. Finally, the two external end terminations are added. For ease of soldering the outer layer of these end termination is Tin (Pb free) solder alloy.



### Quick Reference Data

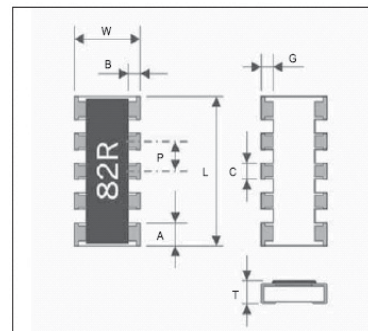
Item	General Specification
Series No.	WT04X
Size	0402x8 (1005x8)
Termination construction	Convex type
Resistance Tolerance	±5% (E24 series)
Resistance Range	10Ω ~ 100KΩ
TCR (ppm/°C)	± 200 ppm/°C
Max. dissipation @ Tamb=70°C	1/16 W
Max. Operation Voltage (DC or RMS)	25V
Max. Overload Voltage (DC or RMS)	50V
Climatic category (IEC 60068)	55/155/56
Circuit Mode: Resistor elements on pin1 ~ pin4, pin6 ~ pin9; R1=R2=R3=R4=R6=R7=R8=R9	

Note :  
1. Power derating curve and detail specification please refer to specific data sheets.

### Physical Dimensions:

Unit: mm

Symbol	
L	3.30±0.20
W	1.60±0.15
T	0.55±0.10
P	0.64±0.05
A	0.50±0.05
B	0.40±0.15
C	0.40±0.15
G	0.40±0.15

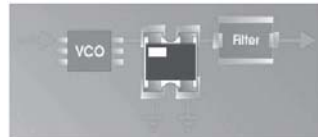


## WA04P Chip Attenuator

### Typical Application of Chip Attenuator

WA04	P	001	X	B	T	L
Size code	Type code	Attenuation Range	Characteristic Impedance	Attenuation Tolerance	Termination	Packaging
WA04: 0402 per element	P: convex, $\pi$ type attenuator	000 = 0dB R05 = 0.5dB 001 = 1dB R15 = 1,5dB 002 = 2dB 003 = 3dB 004 = 4dB 005 = 5dB 006 = 6dB 007 = 7dB 008 = 8dB 009 = 9dB 010 = 10dB 011 = 11dB 012 = 12dB 013 = 13dB 014 = 14dB 015 = 15dB 016 = 16dB 017 = 17dB 018 = 18dB 019 = 19dB 020 = 20dB	X:50 $\Omega$	A : $\pm 0.1$ dB B : $\pm 0.3$ dB C : $\pm 0.4$ dB D : $\pm 0.8$ dB E : $\pm 1.0$ dB F : $\pm 1.5$ dB G : $\pm 2.0$ dB H : $\pm 2.5$ dB P : -	T=7" reel taped	L=Sn base (lead free)

$\pi$  type Attenuator (-6dB, 50W) for VSWR improvement and output frequency level matching on VCO application.



### Quick Reference Data

Item	General Specification
Series No.	WA04P
Size	0402 $\times$ 2 (1005 $\times$ 2)
Termination construction	Convex type
Attenuation Range	0dB, 0.5dB ~ 20dB
Attenuation Tolerance	
0dB	-
0.5dB	$\pm 0.1$ dB
1dB~ 5dB	$\pm 0.3$ dB
6dB~ 10dB	$\pm 0.4$ dB
11dB~ 13dB	$\pm 0.8$ dB
14dB	$\pm 1.0$ dB
15dB~ 16dB	$\pm 1.5$ dB
17dB~ 19dB	$\pm 2.0$ dB
20dB	$\pm 2.5$ dB
Characteristic impedance	50 $\Omega$
Rated power at Tamb=70 $^{\circ}$ C	0.1 W / package
Limiting Voltage (DC)	50V
Frequency range (DC)	MAX. 3 GHz
VSWR (Voltage Standing Wave Ratio)	MAX. 1.2
Number of Resistors	3 resistors
Number of Terminals	4 terminals
Climatic category (IEC 60068)	-40 ~ 125 $^{\circ}$ C

### Physical Dimensions:

Unit: mm	WA04P
L	1.00 $\pm$ 0.10
W	1.00+0.10/-0
T	0.35 $\pm$ 0.10
P	0.65 $\pm$ 0.20
A	0.33 $\pm$ 0.10
Ta	0.15 $\pm$ 0.10
Tb	0.25 $\pm$ 0.10

