



# DESIGN KIT

## WCAP-CSGP Multilayer Ceramic Chip Capacitors 1206 / 1210 / 1812



### SIZE:

1206 / 1210 / 1812

### TECHNICAL DATA:

Capacitance Range: 1000pF ~ 100µF  
Rated Voltages: 6.3V, 10V, 16V, 25V, 50V  
Dielectrics: NPO, X7R, X5R  
Termination: Cu / Ni / Sn

Order Code 885 080

Version 1.0

# WCAP-CSGP

## Multilayer Ceramic Chip Capacitors 1206 / 1210 / 1812

NPO 1206		X7R 1206		X5R 1206		NPO 1210		X7R 1210		X5R 1210		NPO 1812		X7R 1812			
<b>885 012 008 010</b> 10V	<b>885 012 208 019</b> 10V	<b>885 012 208 087</b> 50V	<b>885 012 108 005</b> 6.3V	<b>885 012 009 017</b> 50V	<b>885 012 209 006</b> 10V	<b>885 012 109 004</b> 6.3V	<b>885 012 010 009</b> 50V	<b>885 012 210 025</b> 50V	<b>885 012 008 049</b> 50V	<b>885 012 208 069</b> 25V	<b>885 012 208 088</b> 50V	<b>885 012 108 012</b> 10V	<b>885 012 009 018</b> 50V	<b>885 012 209 028</b> 25V	<b>885 012 109 008</b> 16V	<b>885 012 010 010</b> 50V	<b>885 012 210 026</b> 50V
NP01206333J010DFCT10000 33,000pF, +/-5%, T=0.85mm Q>=1000, IR>=10G Ohm	X7R1206226K010DFCT10000 22µF, +/-10%, T=1.60mm DF<=10%, IR>=0.005G Ohm	X7R1206104K050DFCT10000 100,000pF, +/-10%, T=0.8mm DF<=2.5%, IR>=5G Ohm	X5R1206107M6R3DFCT10000 100µF, +/-20%, T=1.60mm DF<=15%, IR>=0.0005G Ohm	NP01210102J050DFCT10000 1,000pF, +/-5%, T=0.95mm Q>=1000, IR>= 10G Ohm	X7R1210226K010DFCT10000 22µF, +/-10%, T=2.5mm DF<=10%, IR>=0.1G Ohm	X5R1210107M6R3DFCT10000 100µF, +/-20%, T=2.5mm DF<=15%, IR>=0.001G Ohm	NP01812152J050DFCT10000 1,500pF, +/-5%, T=1.25mm Q>=1000, IR>=10G Ohm	X7R1210226K010DFCT10000 22µF, +/-10%, T=2.5mm DF<=10%, IR>=0.1G Ohm	NP01206102J050DFCT10000 1,000pF, +/-5%, T=0.80mm Q>=1000, IR>=10G Ohm	X7R1206106K025DFCT10000 10µF, +/-10%, T=1.60mm DF<=10%, IR>=0.01G Ohm	X7R1206154K050DFCT10000 150,000pF, +/-10%, T=0.95mm DF<=2.5%, IR>=3.3G Ohm	X5R1206476M010DFCT10000 47µF, +/-20%, T=1.60mm DF<=10%, IR>=0.002G Ohm	NP01210152J050DFCT10000 1,500pF, +/-5%, T=0.95mm Q>=1000, IR>= 10G Ohm	X7R1210106K025DFCT10000 10µF, +/-10%, T=2.00mm DF<=5%, IR>=0.1G Ohm	X5R1210475M016DFCT10000 4.7µF, +/-20%, T=2.00mm DF<=5%, IR>=0.1G Ohm	NP01812332J050DFCT10000 3,300pF, +/-5%, T=1.25mm Q>=1000, IR>=10G Ohm	X7R1812154K050DFCT10000 150,000pF, +/-10%, T=1.25mm DF<=2.5%, IR>=3.3G Ohm
<b>885 012 008 050</b> 50V	<b>885 012 208 081</b> 50V	<b>885 012 208 089</b> 50V	<b>885 012 108 015</b> 16V	<b>885 012 009 019</b> 50V	<b>885 012 209 043</b> 50V	<b>885 012 109 009</b> 16V	<b>885 012 010 011</b> 50V	<b>885 012 210 027</b> 50V	<b>885 012 008 051</b> 50V	<b>885 012 208 082</b> 50V	<b>885 012 208 090</b> 50V	<b>885 012 108 017</b> 16V	<b>885 012 009 020</b> 50V	<b>885 012 209 044</b> 50V	<b>885 012 109 010</b> 16V	<b>885 012 010 012</b> 50V	<b>885 012 210 028</b> 50V
NP01206152J050DFCT10000 1,500pF, +/-5%, T=0.80mm Q>=1000, IR>=10G Ohm	X7R1206103K050DFCT10000 10,000pF, +/-10%, T=0.8mm DF<=2.5%, IR>=10G Ohm	X7R1206224K050DFCT10000 220,000pF, +/-10%, T=0.95mm DF<=2.5%, IR>=2.3G Ohm	X5R1206335M016DFCT10000 3.3µF, +/-20%, T=1.60mm DF<=5%, IR>=0.2G Ohm	NP01210222J050DFCT10000 2,200pF, +/-5%, T=0.95mm Q>=1000, IR>= 10G Ohm	X7R1210224K050DFCT10000 220,000µF, +/-10%, T=0.95mm DF<=2.5%, IR>=2.3G Ohm	X5R1210106M016DFCT10000 10µF, +/-20%, T=2.00mm DF<=5%, IR>=0.05G Ohm	NP01812472J050DFCT10000 4,700pF, +/-5%, T=1.25mm Q>=1000, IR>=10G Ohm	X7R1812224K050DFCT10000 220,000pF, +/-10%, T=1.25mm DF<=2.5%, IR>=2.3G Ohm	NP01206222J050DFCT10000 2,200pF, +/-5%, T=0.80mm Q>=1000, IR>=10G Ohm	X7R1206153K050DFCT10000 15,000pF, +/-10%, T=0.8mm DF<=2.5%, IR>=10G Ohm	X7R1206334K050DFCT10000 330,000pF, +/-10%, T=1.25mm DF<=2.5%, IR>=1.5G Ohm	X5R1206106M016DFCT10000 10µF, +/-20%, T=1.60mm DF<=10%, IR>=0.01G Ohm	NP01210332J050DFCT10000 3,300pF, +/-5%, T=0.95mm Q>=1000, IR>= 10G Ohm	X7R1210334K050DFCT10000 330,000µF, +/-10%, T=1.25mm DF<=2.5%, IR>=1.5G Ohm	X5R1210226M016DFCT10000 22µF, +/-20%, T=2.50mm DF<=10%, IR>=0.02G Ohm	NP01812682J050DFCT10000 6,800pF, +/-5%, T=1.25mm Q>=1000, IR>=10G Ohm	X7R1812334K050DFCT10000 330,000pF, +/-10%, T=1.25mm DF<=2.5%, IR>=1.5G Ohm
<b>885 012 008 052</b> 50V	<b>885 012 208 083</b> 50V	<b>885 012 208 091</b> 50V	<b>885 012 108 018</b> 16V	<b>885 012 009 021</b> 50V	<b>885 012 209 045</b> 50V	<b>885 012 109 011</b> 16V	<b>885 012 010 013</b> 50V	<b>885 012 210 029</b> 50V	<b>885 012 008 053</b> 50V	<b>885 012 208 084</b> 50V	<b>885 012 208 092</b> 50V	<b>885 012 108 019</b> 25V	<b>885 012 009 022</b> 50V	<b>885 012 209 046</b> 50V	<b>885 012 109 012</b> 25V	<b>885 012 010 014</b> 50V	<b>885 012 210 030</b> 50V
NP01206332J050DFCT10000 3,300pF, +/-5%, T=0.80mm Q>=1000, IR>=10G Ohm	X7R1206223K050DFCT10000 22,000pF, +/-10%, T=0.8mm DF<=2.5%, IR>=10G Ohm	X7R1206474K050DFCT10000 470,000pF, +/-10%, T=1.60mm DF<=3%, IR>=1.1G Ohm	X5R1206226M016DFCT10000 22µF, +/-20%, T=1.60mm DF<=10%, IR>=0.005G Ohm	NP01210472J050DFCT10000 4,700pF, +/-5%, T=0.95mm Q>=1000, IR>= 10G Ohm	X7R1210474K050DFCT10000 470,000µF, +/-10%, T=1.25mm DF<=2.5%, IR>=1.1G Ohm	X5R1210476M016DFCT10000 47µF, +/-20%, T=2.50mm DF<=10%, IR>=0.002G Ohm	NP01812103J050DFCT10000 10,000pF, +/-5%, T=1.25mm Q>=1000, IR>=10G Ohm	X7R1812474K050DFCT10000 470,000pF, +/-10%, T=1.25mm DF<=2.5%, IR>=1.1G Ohm	NP01206472J050DFCT10000 4,700pF, +/-5%, T=0.80mm Q>=1000, IR>=10G Ohm	X7R1206333K050DFCT10000 33,000pF, +/-10%, T=0.8mm DF<=2.5%, IR>=10G Ohm	X7R1206684K050DFCT10000 680,000pF, +/-10%, T=1.60mm DF<=3%, IR>=0.7G Ohm	X5R1206225M025DFCT10000 2.2µF, +/-20%, T=1.60mm DF<=3.5%, IR>=0.2G Ohm	NP01210682J050DFCT10000 6,800pF, +/-5%, T=0.95mm Q>=1000, IR>= 10G Ohm	X7R1210684K050DFCT10000 680,000µF, +/-10%, T=1.25mm DF<=2.5%, IR>=0.7G Ohm	X5R1210475M025DFCT10000 4.7µF, +/-20%, T=2.00mm DF<=3.5%, IR>=0.1G Ohm	NP01812153J050DFCT10000 15,000pF, +/-5%, T=1.25mm Q>=1000, IR>=10G Ohm	X7R1812684K050DFCT10000 680,000pF, +/-10%, T=2.00mm DF<=2.5%, IR>=0.7G Ohm
<b>885 012 008 054</b> 50V	<b>885 012 208 085</b> 50V	<b>885 012 208 093</b> 50V	<b>885 012 108 020</b> 25V	<b>885 012 009 023</b> 50V	<b>885 012 209 047</b> 50V	<b>885 012 109 013</b> 25V	<b>885 012 010 015</b> 50V	<b>885 012 210 031</b> 50V	<b>885 012 008 055</b> 50V	<b>885 012 208 086</b> 50V	<b>885 012 208 094</b> 50V	<b>885 012 108 021</b> 25V	<b>885 012 009 024</b> 50V	<b>885 012 209 048</b> 50V	<b>885 012 109 014</b> 25V	<b>885 012 010 016</b> 50V	<b>885 012 210 032</b> 50V
NP01206682J050DFCT10000 6,800pF, +/-5%, T=0.95mm Q>=1000, IR>=10G Ohm	X7R1206473K050DFCT10000 47,000pF, +/-10%, T=0.8mm DF<=2.5%, IR>=10G Ohm	X7R1206105K050DFCT10000 1µF, +/-10%, T=1.60mm DF<=3%, IR>=0.5G Ohm	X5R1206475M025DFCT10000 4.7µF, +/-20%, T=1.60mm DF<=7%, IR>=0.1G Ohm	NP012103J050DFCT10000 10,000pF, +/-5%, T=0.95mm Q>=1000, IR>= 10G Ohm	X7R1210105K050DFCT10000 1µF, +/-10%, T=1.25mm DF<=2.5%, IR>=0.5G Ohm	X5R1210106M025DFCT10000 10µF, +/-20%, T=2mm DF<=5%, IR>=0.01G Ohm	NP01812223J050DFCT10000 22,000pF, +/-5%, T=1.25mm Q>=1000, IR>=10G Ohm	X7R1812105K050DFCT10000 1µF, +/-10%, T=2.00mm DF<=2.5%, IR>=0.5G Ohm	NP01206103J050DFCT10000 10,000pF, +/-5%, T=1.25mm Q>=1000, IR>=10G Ohm	X7R1206683K050DFCT10000 68,000pF, +/-10%, T=0.8mm DF<=2.5%, IR>=7.4G Ohm	X7R1206475K050DFCT10000 4.7µF, +/-10%, T=1.60mm DF<=10%, IR>=0.02G Ohm	X5R1206106M025DFCT10000 10µF, +/-20%, T=1.60mm DF<=10%, IR>=0.01G Ohm	NP01215103J050DFCT10000 15,000pF, +/-5%, T=1.25mm Q>=1000, IR>= 10G Ohm	X7R1210475K050DFCT10000 4.7µF, +/-10%, T=2.50mm DF<=2.5%, IR>=0.02G Ohm	X5R1210226M025DFCT10000 22µF, +/-20%, T=2.50mm DF<=10%, IR>=0.005G Ohm	NP01812333J050DFCT10000 33,000pF, +/-5%, T=1.25mm Q>=1000, IR>=10G Ohm	X7R1812225K050DFCT10000 2.2µF, +/-10%, T=2.50mm DF<=2.5%, IR>=0.2G Ohm

Dielectric	Operating Temperature
NPO	-55°C to +125°C
X7R	-55°C to +125°C
X5R	-55°C to +85°C

Dielectric	Capacitance Characteristics*
NPO	± 30ppm/°C; ± 0.54%/°C
X7R	± 15%
X5R	± 15%

\*within Operating Temperature Range

	6.3V
	10V
	16V
	25V
	50V



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