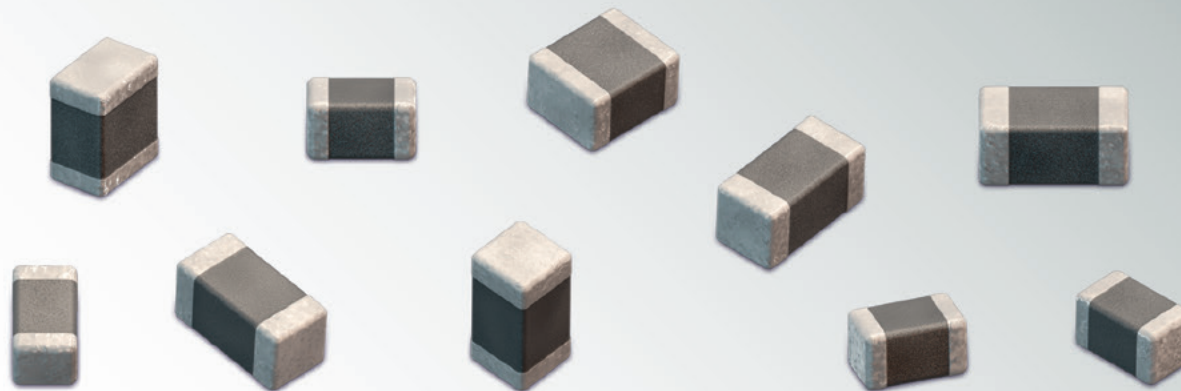


DESIGN KIT

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

**SIZE:**

1206 / 1210 / 1812

TECHNICAL DATA:

Capacitance Range: 1 nF – 100 μ F
Rated Voltages: 6.3 V, 10 V, 16 V, 25 V, 50 V
Dielectrics: NPO, X7R, X5R
Termination: Cu / Ni / Sn

Order Code 885 080**Version 2.0**

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	
885 012 008 010 10 V	885 012 208 019 10 V	885 012 208 087 50 V	885 012 108 005 6.3 V	885 012 009 017 50 V	885 012 209 006 10 V	885 012 109 004 6.3 V	885 012 010 009 50 V	885 012 210 025 50 V	885 012 008 049 50 V	885 012 208 069 25 V	885 012 208 088 50 V	885 012 109 008 16 V	885 012 010 010 50 V	885 012 210 026 50 V	
NP0120633J010DFCT10000	X7R1206226K010DFCT10000	X7R1206104K050DFCT10000	X5R1206107M6R3DFCT10000	NP01210102J050DFCT10000	X7R1210224K010DFCT10000	X5R1210107M6R3DFCT10000	NP01812152J050DFCT10000	X7R1812104K050DFCT10000	NP01206102J050DFCT10000	X7R1206106K025DFCT10000	X7R1206154K050DFCT10000	X5R1210475M016DFCT10000	NP01812332J050DFCT10000	X7R1812154K050DFCT10000	
33 nF, ±5 %, H=1.6 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	22 µF, ±10 %, H=1.6 mm DF ₂ ≤10 %, IR ₂ ≥0.005 GΩ	100 nF, ±10 %, H=0.8 mm DF ₂ ≤5 %, IR ₂ ≥5 GΩ	100 µF, ±20 %, H=1.6 mm DF ₂ ≤15 %, IR ₂ ≥0.0005 GΩ	1 nF, ±5 %, H=0.95 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	22 µF, ±10 %, H=2.5 mm DF ₂ ≤10 %, IR ₂ ≥0.1 GΩ	100 µF, ±20 %, H=2.5 mm DF ₂ ≤15 %, IR ₂ ≥0.001 GΩ	1.5 nF, ±5 %, H=1.25 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	100 nF, ±10 %, H=1.25 mm DF ₂ ≤2.5 %, IR ₂ ≥5 GΩ	1 nF, ±5 %, H=0.8 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	10 µF, ±10 %, H=1.6 mm DF ₂ ≤5 %, IR ₂ ≥3.3 GΩ	150 nF, ±10 %, H=0.95 mm DF ₂ ≤2.5 %, IR ₂ ≥2.3 GΩ	47 µF, ±20 %, H=1.6 mm DF ₂ ≤5 %, IR ₂ ≥0.002 GΩ	4.7 µF, ±20 %, H=2.0 mm DF ₂ ≤5 %, IR ₂ ≥0.1 GΩ	3.3 nF, ±5 %, H=1.25 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	150 nF, ±10 %, H=1.25 mm DF ₂ ≤2.5 %, IR ₂ ≥3.3 GΩ
885 012 008 050 50 V	885 012 208 081 50 V	885 012 208 089 50 V	885 012 108 015 16 V	885 012 009 019 50 V	885 012 209 043 50 V	885 012 109 009 16 V	885 012 010 011 50 V	885 012 210 027 50 V	885 012 008 051 50 V	885 012 208 082 50 V	885 012 208 090 50 V	885 012 108 017 16 V	885 012 009 020 50 V	885 012 210 028 50 V	
NP01206152J050DFCT10000	X7R1206103K050DFCT10000	X7R1206224K050DFCT10000	X5R1206335M016DFCT10000	NP01210222J050DFCT10000	X7R1210222K050DFCT10000	X5R1210106M016DFCT10000	NP01812472J050DFCT10000	X7R1812224K050DFCT10000	NP01206222J050DFCT10000	X7R1206153K050DFCT10000	X7R1206334K050DFCT10000	X5R1206106M016DFCT10000	NP01210332J050DFCT10000	X7R1812334K050DFCT10000	
1.5 nF, ±5 %, H=0.8 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	10 nF, ±10 %, H=0.8 mm DF ₂ ≤2.5 %, IR ₂ ≥10 GΩ	220 nF, ±10 %, H=0.95 mm DF ₂ ≤2.5 %, IR ₂ ≥2.3 GΩ	3.3 µF, ±20 %, H=1.6 mm DF ₂ ≤5 %, IR ₂ ≥0.2 GΩ	2.2 nF, ±5 %, H=0.95 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	220 nF, ±10 %, H=0.95 mm DF ₂ ≤2.5 %, IR ₂ ≥2.3 GΩ	10 µF, ±20 %, H=2.0 mm DF ₂ ≤5 %, IR ₂ ≥0.05 GΩ	4.7 nF, ±5 %, H=1.25 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	220 nF, ±10 %, H=1.25 mm DF ₂ ≤2.5 %, IR ₂ ≥3 GΩ	2.2 nF, ±5 %, H=0.8 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	15 nF, ±10 %, H=0.8 mm DF ₂ ≤2.5 %, IR ₂ ≥10 GΩ	330 nF, ±10 %, H=1.25 mm DF ₂ ≤2.5 %, IR ₂ ≥1.5 GΩ	10 µF, ±20 %, H=1.6 mm DF ₂ ≤5 %, IR ₂ ≥0.1 GΩ	3.3 nF, ±5 %, H=0.95 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	6.8 nF, ±5 %, H=1.25 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	330 nF, ±10 %, H=1.25 mm DF ₂ ≤2.5 %, IR ₂ ≥1.5 GΩ
885 012 008 052 50 V	885 012 208 083 50 V	885 012 208 091 50 V	885 012 108 018 16 V	885 012 009 021 50 V	885 012 209 045 50 V	885 012 109 011 16 V	885 012 010 013 50 V	885 012 210 029 50 V	885 012 008 053 50 V	885 012 208 084 50 V	885 012 208 092 50 V	885 012 108 019 25 V	885 012 009 022 50 V	885 012 210 030 50 V	
NP01206332J050DFCT10000	X7R1206223K050DFCT10000	X7R1206474K050DFCT10000	X5R1206226M016DFCT10000	NP01210472J050DFCT10000	X7R1210474K050DFCT10000	X5R1210476M016DFCT10000	NP01812103J050DFCT10000	X7R1812474K050DFCT10000	NP01206472J050DFCT10000	X7R1206333K050DFCT10000	X7R1206684K050DFCT10000	X5R1206225M025DFCT10000	NP01210682J050DFCT10000	X7R1812684K050DFCT10000	
3.3 nF, ±5 %, H=0.8 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	22 nF, ±10 %, H=0.8 mm DF ₂ ≤2.5 %, IR ₂ ≥10 GΩ	470 nF, ±10 %, H=1.6 mm DF ₂ ≤3 %, IR ₂ ≥1.1 GΩ	22 µF, ±20 %, H=1.6 mm DF ₂ ≤10 %, IR ₂ ≥0.005 GΩ	4.7 nF, ±5 %, H=0.95 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	470 nF, ±10 %, H=1.25 mm DF ₂ ≤2.5 %, IR ₂ ≥1.1 GΩ	47 µF, ±20 %, H=2.50 mm DF ₂ ≤10 %, IR ₂ ≥0.002 GΩ	10 nF, ±5 %, H=1.25 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	470 nF, ±10 %, H=1.25 mm DF ₂ ≤2.5 %, IR ₂ ≥1.1 GΩ	885 012 008 054 50 V	885 012 208 085 50 V	885 012 208 093 50 V	885 012 108 020 25 V	885 012 009 023 50 V	885 012 210 031 50 V	
NP01206682J050DFCT10000	X7R1206473K050DFCT10000	X7R1206105K050DFCT10000	X5R1206475M025DFCT10000	NP01210103J050DFCT10000	X7R1210105K050DFCT10000	X5R1210475M025DFCT10000	NP01812153J050DFCT10000	X7R1812684K050DFCT10000	NP01206682J050DFCT10000	X7R1206473K050DFCT10000	X7R1206105K050DFCT10000	X5R1206475M025DFCT10000	NP01210103J050DFCT10000	X7R1812105K050DFCT10000	
4.7 nF, ±5 %, H=0.8 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	47 nF, ±10 %, H=0.8 mm DF ₂ ≤2.5 %, IR ₂ ≥10 GΩ	880 nF, ±10 %, H=1.6 mm DF ₂ ≤3 %, IR ₂ ≥0.7 GΩ	2.2 µF, ±20 %, H=1.6 mm DF ₂ ≤3.5 %, IR ₂ ≥0.2 GΩ	6.8 nF, ±5 %, H=0.95 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	880 nF, ±10 %, H=1.25 mm DF ₂ ≤2.5 %, IR ₂ ≥0.7 GΩ	4.7 µF, ±20 %, H=2.0 mm DF ₂ ≤3.5 %, IR ₂ ≥0.1 GΩ	15 nF, ±5 %, H=1.25 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	680 nF, ±10 %, H=2.0 mm DF ₂ ≤2.5 %, IR ₂ ≥0.7 GΩ	885 012 008 054 50 V	885 012 208 085 50 V	885 012 208 093 50 V	885 012 108 020 25 V	885 012 009 023 50 V	885 012 210 031 50 V	
NP01206682J050DFCT10000	X7R1206473K050DFCT10000	X7R1206105K050DFCT10000	X5R1206475M025DFCT10000	NP01210103J050DFCT10000	X7R1210105K050DFCT10000	X5R1210475M025DFCT10000	NP01812153J050DFCT10000	X7R1812684K050DFCT10000	NP01206682J050DFCT10000	X7R1206473K050DFCT10000	X7R1206105K050DFCT10000	X5R1206475M025DFCT10000	NP01210103J050DFCT10000	X7R1812105K050DFCT10000	
885 012 008 055 50 V	885 012 208 086 50 V	885 012 208 094 50 V	885 012 108 021 25 V	885 012 009 024 50 V	885 012 209 048 50 V	885 012 109 014 25 V	885 012 010 016 50 V	885 012 210 032 50 V	885 012 008 055 50 V	885 012 208 086 50 V	885 012 208 094 50 V	885 012 108 021 25 V	885 012 009 024 50 V	885 012 210 032 50 V	
NP01206103J050DFCT10000	X7R1206683K050DFCT10000	X7R1206475K050DFCT10000	X5R1206106M025DFCT10000	NP01210153J050DFCT10000	X7R1210475K050DFCT10000	X5R1210226M025DFCT10000	NP01812333J050DFCT10000	X7R1812225K050DFCT10000	NP01206103J050DFCT10000	X7R1206683K050DFCT10000	X7R1206475K050DFCT10000	X5R1206106M025DFCT10000	NP01210153J050DFCT10000	X7R1812225K050DFCT10000	
10 nF, ±5 %, H=1.25 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	68 nF, ±10 %, H=0.8 mm DF ₂ ≤2.5 %, IR ₂ ≥7.4 GΩ	4.7 µF, ±10 %, H=1.6 mm DF ₂ ≤10 %, IR ₂ ≥0.02 GΩ	10 µF, ±10 %, H=1.6 mm DF ₂ ≤10 %, IR ₂ ≥0.01 GΩ	15 nF, ±5 %, H=1.25 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	4.7 µF, ±10 %, H=2.50 mm DF ₂ ≤5 %, IR ₂ ≥0.02 GΩ	22 µF, ±10 %, H=2.50 mm DF ₂ ≤10 %, IR ₂ ≥0.005 GΩ	33 nF, ±5 %, H=1.25 mm Q ₂ ≥1000, IR ₂ ≥10 GΩ	2.2 µF, ±10 %, H=2.50 mm DF ₂ ≤2.5 %, IR ₂ ≥0.2 GΩ	885 012 008 055 50 V	885 012 208 086 50 V	885 012 208 094 50 V	885 012 108 021 25 V	885 012 009 024 50 V	885 012 210 032 50 V	

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	±30 ppm/°C; ±0.54 %
X7R	±15 %
X5R	±15 %

*within Operating Temperature Range

	6.3 V
	10 V
	16 V
	25 V
	50 V



EMC COMPONENTS | INDUCTORS | TRANSFORMERS | RF COMPONENTS | CIRCUIT PROTECTION | EMC SHIELDING MATERIAL | LEDS | CONNECTORS | SWITCHES | ASSEMBLY TECHNIQUE | REDCUBE TERMINALS | CAPACITORS | QUARTZ CRYSTALS

Important information: Würth Elektronik's design kits contain reference components. These components correspond with the current product development status on the day of supply. Exchange of the reference components to components with up-to-date product development status is not carried out automatically. No liability is taken for the use of these reference components. Therefore, please request new samples prior to releases for series production and product release.

All products
ex stock!

Please check datasheets on www.we-online.com for specifications. Würth Elektronik eiSos GmbH & Co. KG, EMC & Inductive Solutions. © 2019

www.we-online.com