

Metallized Polyphenylene-Sulphide (PPS) SMD Film Capacitors with Box Encapsulation. Capacitances from 0.01 μ F to 2.2 μ F. Rated Voltages from 63 VDC to 1000 VDC. Size Codes from 1812 to 6054.

Special Features

- Size codes 1812, 2220, 2824, 4030,5040 and 6054 with PPS and encapsulated
- Operating temperature up to 140°C
- Self-healing
- Suitable for lead-free soldering
- Low dissipation factor
- Low dielectric absorption
- Very constant capacitance value versus temperature
- According to RoHS 2015/863/EU

Typical Applications

For general applications in high temperature circuits e.g.

- By-pass
- Blocking
- Coupling and decoupling
- Timing
- Filtering
- Oscillating circuits

Construction

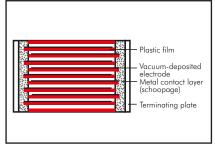
Dielectric:

Polyphenylene-sulphide (PPS) film

Capacitor electrodes:

Vacuum-deposited

Internal construction:



Encapsulation:

Solvent-resistant, flame-retardant plastic case, UL 94 V-0

Terminations:

Tinned plates.

Markina:

Box colour: Black.

Electrical Data

Capacitance range: 0.01 μF to 2.2 μF Rated voltages:

63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC

Capacitance tolerances:

 $\pm 20\%$, $\pm 10\%$ ($\pm 5\%$ available subject to special enquiry)

Operating temperature range:

 -55° C to $+140^{\circ}$ C

Climatic test category:

55/140/56 in accordance with IEC

Insulation resistance at +20° C:

Test voltage:

1.6 U_r, 2 sec.

Voltage derating:

For DC and AC voltages a voltage derating factor of 1% per K must be applied from +100° C and of 2% per K from +125° C.

Reliability:

Operational life > 300000 hours Failure rate < 2 fit (0.5 x U_r and 40° C)

U _r	U _{test}	C ≤ 0.33 µF	0.33 µF < C ≤ 2.2 µF
63 VDC 100 VDC	50 V 100 V		≥ 3000 sec (MΩ x μF)
≥ 250 VDC	100 V	≥ 3 x 10 ⁴ MΩ	≥ 6000 sec (MΩ x μF)

Measuring time: 1 min.

Dissipation factors at $+20^{\circ}$ C: tan δ

at f	C ≤ 0.1 µF	$0.1 \ \mu F < C \le 1.0 \ \mu F$	C > 1.0 µF
1 kHz	≤ 15 x 10 ⁻⁴	≤ 20 x 10 ⁻⁴	≤ 20 x 10 ⁻⁴
10 kHz	≤ 25 x 10 ⁻⁴	≤ 25 x 10 ⁻⁴	-
100 kHz	≤ 50 x 10 ⁻⁴	_	-

Maximum pulse rise time:

Capacitance µF	63 VDC			time V/µse 400 VDC		1000 VDC
0.01 0.022	15	25	30	35	40	45
0.033 0.068		15	20	25	28	32
0.1 0.22	10	10	12	15	_	_
0.33 0.68	5	5	6	8	_	_
1.0 2.2	3	3	-	-	_	_

Dip Solder Test/Processing

Resistance to soldering heat:

Test Tb in accordance with DIN IEC 60068-2-58/DIN EN 60384-20. Soldering bath temperature max. 260° C. Soldering duration max. 5 sec. Change in capacitance Δ C/C < 5%.

Soldering process:

Re-flow soldering (see temperature/time graphs page 13).

Packing

Available taped and reeled in blister pack.

Detailed taping information and graphs at the end of the catalogue.

For further details and graphs please refer to Technical Information.



Continuation

General Data

		63	3 VDC/40 VAC*		10	0 VDC/63 VAC*		250) VDC/160 VAC*				
Capacitance	Size code	H ±0.3	Part number	Size code	Н ±0.3	Part number	Size code	Н ±0.3					
0.01 µF	1812 2220	3.0	SMDIC02100KA00 SMDIC02100QA00	1812 2220	3.0	SMDID02100KA00 SMDID02100QA00	2220	3.5	SMDIF02100QA00				
0.015 "	1812 2220	3.0 3.5	SMDIC02150KA00 SMDIC02150QA00	1812 2220	3.0 3.5	SMDID02150KA00 SMDID02150QA00	2220	3.5	SMDIF02150QA00				
0.022 "	1812 2220	3.0 3.5	SMDIC02220KA00 SMDIC02220QA00	1812 2220	3.0 3.5	SMDID02220KA00 SMDID02220QA00	2220 2824	3.5 3.0	SMDIF02220QA00 SMDIF02220TA00				
0.033 "	1812 2220 2824	3.0 3.5 3.0	SMDIC02330KA00 SMDIC02330QA00 SMDIC02330TA00	1812 2220 2824	3.0 3.5 3.0	SMDID02330KA00 SMDID02330QA00 SMDID02330TA00	2824 4030	3.0 5.0	SMDIF02330TA00 SMDIF02330VA00				
0.047 "	1812 2220 2824	3.0 3.5 3.0	SMDIC02470KA00 SMDIC02470QA00 SMDIC02470TA00	1812 2220 2824	3.0 3.5 3.0	SMDID02470KA00 SMDID02470QA00 SMDID02470TA00	2824 4030	5.0 5.0	SMDIF02470TB00 SMDIF02470VA00				
0.068 "	1812 2220 2824	3.0 3.5 3.0	SMDIC02680KA00 SMDIC02680QA00 SMDIC02680TA00	2220 2824	3.5 3.0	SMDID02680QA00 SMDID02680TA00	2824 4030	5.0 5.0	SMDIF02680TB00 SMDIF02680VA00				
0.1 µF	1812 2220 2824	3.0 3.5 3.0	SMDIC03100KA00 SMDIC03100QA00 SMDIC03100TA00	2220 2824	3.5 3.0	SMDID03100QA00 SMDID03100TA00	2824 4030 5040	5.0 5.0 6.0	SMDIF03100TB00 SMDIF03100VA00 SMDIF03100XA00				
0.15 "	1812 2220 2824	4.0 3.5 3.0	SMDIC03150KB00 SMDIC03150QA00 SMDIC03150TA00	2824	3.0	SMDID03150TA00	4030 5040 6054	5.0 6.0 7.0	SMDIF03150VA00 SMDIF03150XA00 SMDIF03150YA00				
0.22 "	2220 2824	4.5 5.0	SMDIC03220QB00 SMDIC03220TB00	2220 2824	4.5 5.0	SMDID03220QB00 SMDID03220TB00	4030 5040 6054	5.0 6.0 7.0	SMDIF03220VA00 SMDIF03220XA00 SMDIF03220YA00				
0.33 "	2220 2824 4030	4.5 5.0 5.0	SMDIC03330QB00 SMDIC03330TB00 SMDIC03330VA00	2824 4030	5.0 5.0	SMDID03330VA00	5040 6054	6.0 7.0	SMDIF03330XA00 SMDIF03330YA00				
0.47 "	2220 2824 4030	4.5 5.0 5.0	SMDIC03470QB00 SMDIC03470TB00 SMDIC03470VA00	2824 4030	5.0 5.0	SMDID03470TB00 SMDID03470VA00	6054	7.0	SMDIF03470YA00				
0.68 "	2824 4030	5.0 5.0	SMDIC03680TB00 SMDIC03680VA00	4030	5.0	SMDID03680VA00							
1.0 µF	2824 4030 5040	5.0 5.0 6.0	SMDIC04100TB00 SMDIC04100VA00 SMDIC04100XA00	5040	6.0	SMDID04100XA00							
1.5 "	4030 5040		SMDIC04150VA00	6054	7.0	SMDID04150YA00			rance: 20 % = M 10 % = K				
2.2 "	6054			6054	7.0	SMDID04220YA00		Pack Pin I	5 % = J				
* AC voltages:	f ≤ 400	O Hz;	$1.4 \times U_{rms} + UDC \leq U_{r}$					Taped version see page 156.					

AC voltages: $f \le 400 \text{ Hz}$; 1.4 x $U_{rms} + UDC \le U_r$

Dims. in mm.

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Continuation

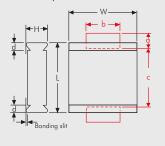
General Data

		400) VDC/200 VAC*		630) VDC/300 VAC*		100	0 VDC/400 VAC*
Capacitance	Size code	H ±0.3	Part number	Size code	Н ±0.3	Part number	Size code	Н ±0.3	Part number
0.01 µF				5040	6.0	SMDIJ02100XA00	5040	6.0	SMDIO12100XA00
0.015 "				5040	6.0	SMDIJ02150XA00	5040	6.0	SMDIO12150XA00
0.022 "	4030 5040		SMDIG02220VA00 SMDIG02220XA00	5040	6.0	SMDIJ02220XA00	6054	7.0	SMDIO12220YA00
0.033 "	4030 5040		SMDIG02330VA00 SMDIG02330XA00	5040	6.0	SMDIJ02330XA00	6054	7.0	SMDIO12330YA00
0.047 "	4030 5040	6.0	SMDIG02470VA00 SMDIG02470XA00	5040	6.0	SMDIJ02470XA00			
0.068 "	4030 5040		SMDIG02680VA00 SMDIG02680XA00	6054	7.0	SMDIJ02680YA00			
0.1 µF	4030 5040 6054	6.0 7.0	SMDIG03100VA00 SMDIG03100XA00 SMDIG03100YA00						
0.15 "	5040 6054	7.0							
0.22 "	6054	7.0	SMDIG03220YA00						
0.33 "	6054	7.0	SMDIG03330YA00						

^{*} AC voltages: f \leq 400 Hz; 1.4 x U $_{rms}$ + UDC \leq U $_{r}$

Dims. in mm.

Solder pad recommendation



Part number	completion:
Tolerance:	20 % = M
	10 % = K
	5 % = J
Packing:	bulk = S

Packing: bulk = S Pin length: none = 00 Taped version see page 156.

Size code	L ±0.3	W ±0.3	d	a min.	b min.	c max.
1812	4.8	3.3	0.5	1.2	3.5	3.5
2220	5.7	5.1	0.5	1.2	4	4.5
2824	7.2	6.1	0.5	1.2	4	6.5
4030	10.2	7.6	0.5	2.5	6	9
5040	12.7	10.2	0.7	2.5	6	11.5
6054	15.3	13.7	0.7	2.5	6	14

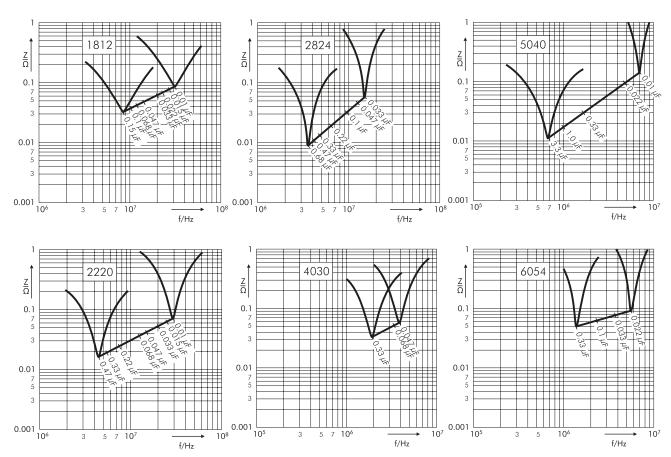
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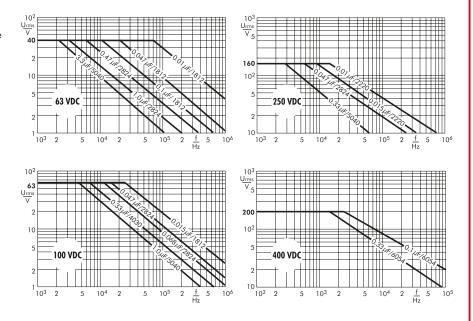


Continuation

Impedance change with frequency (general guide).



Permissible AC voltage in relation to frequency at 10° C internal temperature rise (general guide).



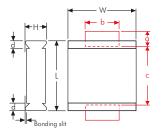
Recommendation for Processing — and Application of SMD Capacitors



Layout Form

The components can generally be positioned on the carrier material as desired. In order to prevent soldering shadows or ensure regular temperature distribution, extreme concentration of the components should be avoided. In practice, it has proven best to keep a minimum distance of the soldering surfaces between two WIMA SMDs of twice the height of the components.

Solder Pad Recommendation



Size	L	W	d	а	b	С
code	± 0.3	± 0.3		min.	min.	max.
1812	4.8	3.3	0.5	1.2	3.5	3.5
2220	5.7	5.1	0.5	1.2	4	4.5
2824	7.2	6.1	0.5	1.2	4	6.5
4030	10.2	7.6	0.5	2.5	6	9
5040	12.7	10.2	0.7	2.5	6	11.5
6054	15.3	13.7	0.7	2.5	6	14

The solder pad size recommendations given for each individual series are to be understood as minimum dimensions which can at any time be adjusted to the layout form.

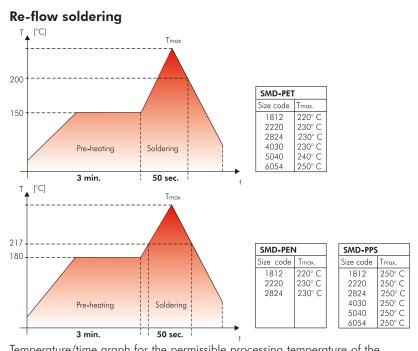
Processing

The processing of SMD components

- assembling
- soldering
- electrical final inspection/calibrating

must be regarded as a complete process. The soldering of the printed circuit board, for example, can constitute considerable stress on all the electronic components. The manufacturer's instructions on the processing of the components are mandatory.

Soldering Process



Temperature/time graph for the permissible processing temperature of the WIMA SMD film capacitor for typical convection soldering processes.

Due to versatile procedures exact processing parameters for re-flow soldering processes cannot be specified. The graph depicted is to be understood as a recommendation to help establishing a suitable soldering profile fulfilling the requirements in practice at the user. During processing a max. temperature of T=210° C inside the component should not be exceeded. Due to the differing heat absorption the length of the soldering process should be kept as short as possible for smaller size codes.

SMD Handsoldering

WIMA SMD capacitors with plastic film dielectric are generally suitable for hand-soldering, e. g. for lab purposes, with a soldering iron where, however, similar to automated soldering processes, a certain duration and temperature should not be exceeded. These parameters are dependent on the physical size of the components and the relevant heat absorption involved.

The below data are to be regarded as guideline values and should serve to avoid damage to the dielectric caused by excessive heat during the soldering process. The soldering quality depends on the tool used and on the skill and experience of the person with the soldering iron in hand.

Size code	Temperature °C / °F	Time duration
1812	250/482	2 sec plate 1 / 5 sec off / 2 sec plate 2
2220	250/482	3 sec plate 1 / 5 sec off / 3 sec plate 2
2824	260/500	3 sec plate 1 / 5 sec off / 3 sec plate 2
4030	260/500	5 sec plate 1 / 5 sec off / 5 sec plate 2
5040	260/500	5 sec plate 1 / 5 sec off / 5 sec plate 2
6054	260/500	5 sec plate 1 / 5 sec off / 5 sec plate 2

Recommendation for Processing—and Application of SMD Capacitors (Continuation)



Solder Paste

To achieve reliable soldering results one of the following solder alloys have from case to case proven being workable:

Lead free solder paste

Sn - Bi

Sn - Zn (Bi)

Sn - Ag - Cu (suitable for SMD-PET 5040/6054, SMD-PEN and SMD-PPS)

Solder paste with lead

Sn - Pb - Ag (Sn60-Pb40-A, Sn63-Pb37-A)

Washing

WIMA SMD components with plastic encapsulation - like all other components of similar construction irrespective of the make - cannot be regarded as hermetically sealed. Due to today's common washing substances, e. g. on aqueous basis instead of the formerly used halogenated hydrocarbons, with enhanced washing efficiency it became obvious that assembled SMD capacitors may show an impermissibly high deviation of the electrical parameters after a corresponding washing process. Hence it is recommended to refrain from applying industrial washing processes for WIMA SMD capacitors in order to avoid possible damages.

Initial Operation/Calibration

Due to the stress which the components are subjected to during processing, reversible parameter changes occur in almost all electronic components. The capacitance recovery accuracy to be expected with careful processing is within a scope of

 $|\Delta C/C| \le 5 \%$.

For the initial operation of the device a minimum storage time of

 $t \ge 24 \text{ hours}$

is to be taken into account. With calibrated devices or when the application is largely dependent on capacitance it is advisable to prolong the storage time to

t ≥ 10 days

In this way ageing effects of the capacitor structure can be anticipated. Parameter changes due to processing are not to be expected after this period of time

Humidity Protection Bags

Taped WIMA SMD capacitors are shipped in humidity protection bags according to JEDEC standard (ESD/EMI-shield/water-vapour proof).

Under controlled conditions the components can be stored two years and more in the originally sealed bag. Opened packing units should immediately be used up for processing. If storage is necessary the opened packing units should be stored air-tight in the original plastic bag.

Reliability

Taking account of the manufacturer's guidelines and compatible processing, the WIMA SMD stand out for the same high quality and reliability as the analogous through-hole WIMA series. The technology of metallized film capacitors used e.g. in WIMA SMD-PET achieves the best values for all fields of application. The expected value is about:

 $\lambda_0 \leq 2$ fit

Furthermore the production of all WIMA components is subject to the regulations laid down by ISO 9001:2015 as well as the guidelines for component specifications set out by IEC quality assessment system (IECQ) for electronic components.

Electrical Characteristics and Fields of Application

Basically the WIMA SMD series have the same electrical characteristics as the analogous through-hole WIMA capacitors. Compared to ceramic or tantalum dielectrics WIMA SMD capacitors have a number of other outstanding qualities:

- favourable pulse rise time
- low ESR
- low dielectric absorption
- available in high voltage series
- large capacitance spectrum
- stand up to high mechanical stress
- good long-term stability

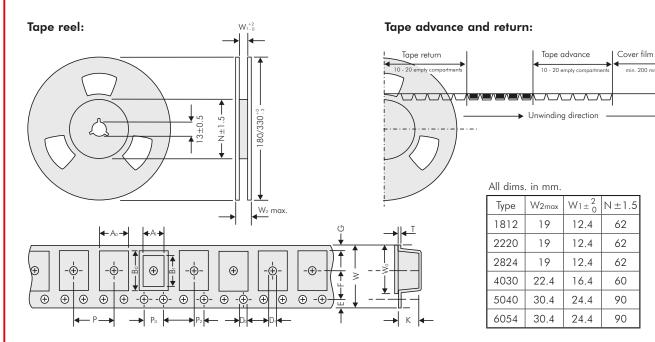
As regards technical performance as well as quality and reliability, the WIMA SMD series offer the possibility to cover nearly all applications of conventionally through-hole film capacitors with SMD components. Furthermore, the WIMA SMD series can now be used for all the demanding capacitor applications for which, in the past, the use of through-hole components was mandatory:

- measuring techniques
- oscillator circuits
- differentiating and integrating circuits
- A/D or D/A transformers
- sample and hold circuits
- automotive electronics

With the WIMA SMD programme available today, the major part of all plastic film capacitors can be replaced by WIMA SMD components. The field of application ranges from standard coupling capacitors to use in switch-mode power supplies as filter or charging capacitors with high voltage and capacitance values, as well as in telecommunications e.g. the well-known telephone capacitor $1\mu F/250VDC$.

Blister Tape Packaging and Packing Units of the WIMA SMD Capacitors





Size Code	1812	Ao ± 0.1	Αı	Bo ± 0.1	В1	D ₀	D ₁	P + 0.1	Po*	P ₂	E ± 0.1	F +0.05	G	W +0.3	W ₀	K ± 0.1	T +01
Box size	Code			_ 0		-0	-0			_ 0.00		_ 0.00		_ 0.0	_ 0.2		_ 0
4.8x3.3x3	KA	3.55	3.3	5.1	4.8	P1.5	P1.5	8	4	2	1.75	5.5	2.2	12	9.5	3.4	0.3
4.8x3.3x4	KB	3.55	3.3	5.1	4.8	P1.5	P1.5	8	4	2	1.75	5.5	2.2	12	9.5	4.4	0.3

Size Code	2220	A0 ± 0.1	Αı	Bo ± 0.1	В1	Do + 0.1	D ₁	P ± 0.1	Po*	P ₂ ± 0.05	E +01	F +0.05	G	W +0.3	W ₀ ± 0.2	K +01	T ± 0.1
Box size	Code			_ 0.1		-0	-0	_ 0.1	_ 0.1	_ 0.00	_ 0.1	_ 0.00		_ 0.0	_ 0.2	_ 0.1	_ 0.1
5.7x5.1x3.5	QA	6.3	5.7	5.6	5.1	P1.5	P1.5	8	4	2	1.75	5.5	1.95	12	9.5	3.7	0.3
5.7x5.1x4.5	QB	6.3	5.7	5.6	5.1	P1.5	P1.5	8	4	2	1.75	5.5	1.95	12	9.5	4.7	0.3

Size Code	2824	Ao ± 0.1	Αı	Bo ± 0.1	В1	D ₀ + 0.1	D ₁	P + 0.1	Po*	P ₂ ± 0.05	E +01	F +0.05	G	W ± 0.3	W ₀	K +0.1	T +0.1
Box size	Code			_ 0.1		-0	-0	_ 0.1	_ 0.1	_0.00	_ 0.1	_ 0.00		_ 0.0	_ 0.2	_ 0.1	_ 0.1
7.2x6.1x3	TA	6.6	6.1	7.7	7.2	P1.5	P1.5	12	4	2	1.75	5.5	0.9	12	9.5	3.4	0.3
7.2x6.1x5	ТВ	6.6	6.1	7.7	7.2	P1.5	P1.5	12	4	2	1.75	5.5	0.9	12	9.5	5.4	0.4

	Code		Aı	Bo ± 0.1	В1	D0 + 0.1 -0	D1 + 0.1 -0			P ₂ ±0.05		F ±0.05		W ± 0.3			T ±0.1
Size Code 4030	VA	10.7	10.2	8.1	9.1	P1.5	P1.5	16	4	2	1.75	7.5	1.9	16	13.3	5.5	0.3
Size Code 5040	XA	13.5	12.7	11	11.5	P1.5	P1.5	16	4	2	1.75	11.5	4.7	24	21.3	6.5	0.3
Size Code 6054	YA	17.0	16.5	15.6	15.0	P1.5	P1.5	20	4	2	1.75	11.5	2.95	24	21.3	7.5	0.3

^{*} cumulative after 10 steps p 0.2 mm max. Samples and pre-production needs on request or 1 Reel minimum.

Packing units

	taped Reel 180 mm Ø	taped Reel 330 mm Ø	bulk Standard
ı	700	2500	3000
	500	2000	3000

taped Reel 180 mm Ø	taped Reel 330 mm Ø	bulk Standard
500	1800	3000
400	1500	3000

taped Reel 330 mm Ø	bulk Standard
1500	2000
750	2000

taped Reel	bulk
330 mm Ø	Standard
775	2000
600	1000
450	500

Part number codes for SMD packing

W (Blister)	Ø in mm	Code
12	180	Р
12	330	Ø
16	330	R
24	330	Т

Bulk Standard	S

- WIMA Part Number System



A WIMA part number consists of 18 digits and is composed as follows:

Field 1 - 4: Type description Field 5 - 6: Rated voltage Field 7 - 10: Capacitance Field 11 - 12: Size and PCM

Field 13 - 14: Version code (e.g. Snubber versions)

Field 15: Capacitance tolerance

Field 16: Packing

Field 17 - 18: Pin length (untaped)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
M	К	S	2	С	0	2	1	0	0	1	Α	0	0	М	S	S	D
	MK	S 2		63 \	/DC	0.01 µF			2.5×6.5×7.2		2 -		20%	bulk	6	-2	

Type description: Rated voltage: Capacitance: Size: SMD-PET = SMDT 50 VDC = B0 22 pF = 0022 4.8x3.3x3 Size 1812 = KA SMD-PEN = SMDN 63 VDC = C0 47 pF = 0047 4.8x3.3x4 Size 1812 = KA SMD-PPS = SMDI 100 VDC = D0 100 pF = 0100 5.7x5.1x3.5 Size 2220 = QA FKP 02 = FKP0 250 VDC = F0 150 pF = 0150 5.7x5.1x4.5 Size 2220 = QB ±2.5% = J MKS 02 = MKS0 400 VDC = G0 220 pF = 0220 7.2x6.1x3 Size 2220 = QB ±2.5% = J FKP 2 = FKS2 450 VDC = H0 330 pF = 0330 7.2x6.1x3 Size 2824 = TB ±1% = E FKP 3 = FKP3 630 VDC = H0 470 pF = 0470 10.2x7.6x5 Size 4030 = VA MKS 2 = MKP2 800 VDC = K0 1500 pF = 1150 2.5x7x4.6 PCM2.5 = OB <t< th=""><th></th></t<>	
SMD-PEN = SMDN 63 VDC = CO 47 pF = 0047 4.8x3.3x4 Size 1812 = KB ±10% = KB SMD-PPS = SMDI 100 VDC = D0 100 pF = 0100 5.7x5.1x3.5 Size 2220 = QA ±5% = J FKP 02 = FKP0 250 VDC = FO 150 pF = 0150 5.7x5.1x4.5 Size 2220 = QB ±2.5% = F FKS 2 = FKS2 450 VDC = H0 330 pF = 0330 7.2x6.1x5 Size 2824 = TB ±1% = E FKP 2 = FKP2 520 VDC = H2 470 pF = 0470 10.2x7.6x5 Size 4030 = VA ±1% = E FKS 3 = FKS3 600 VDC = I0 680 pF = 0680 12.7x10.2x6 Size 5040 = XA FKP 3 = FKP 3 630 VDC = J0 1000 pF = 1100 15.3x13.7x7 Size 6054 = YA AMMO H16.5 MKP 2 = MKP2 800 VDC = L0 2200 pF = 1220 3x7.5x	
FKP 1 = FKP1 1200 VDC = Q0 0.022 μF = 2220 3x9x13 PCM10 = 3A REEL H18.5 36 MKP-X2 = MKX2 1500 VDC = S0 0.047 μF = 2470 4x9x13 PCM10 = 3C REEL H18.5 36 MKP-Y2 = MKY2 1600 VDC = T0 0.22 μF = 3220 5x11x18 PCM15 = 4B ROLL H16.5 MKP 4F = MKPF 1700 VDC = TA 0.47 μF = 3470 5x14x26.5 PCM22.5 = 5A BLISTER W12.3 Snubber MKP = SNMP 2000 VDC = U0 1 μF = 4100 6x15x26.5 PCM22.5 = 5B BLISTER W12.3 GTO MKP = GTOM 3000 VDC = W0 4.7 μF = 4470 11x21x31.5 PCM27.5 = 6B BLISTER W12.3 DC-LINK MKP 4 = DCP4 4000 VDC = X0 10 μF = 5100 9x19x41.5 PCM37.5 = 7A BUIK/TPS Stand DC-LINK HC = DCHC 230 VAC = 3Y 275 VAC = 1W 100 μF = 6100 25x45x57 PCM 52.5 = 9D 305 VAC = AW 305 VAC = AW 1000 μF = 7100	5 340x340 = A 5 490x370 = B 5 340x340 = C 5 490x370 = D 60 = F 00 = H 60 = I 00 = J = N = O 180 = P 330 = Q 330 = R 330 = T
$ \begin{vmatrix} 350 \text{ VAC} &= \text{BW} \\ 440 \text{ VAC} &= 4W \\ \dots \end{vmatrix} $	

The data on this page is not complete and serves only to explain the part number system. Part number information is listed on the pages of the respective WIMA range.

Version A1.1.1 = 1BVersion A2

Pin length (taped)