

March 2020

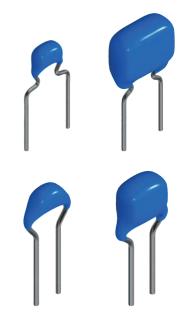
MLCC with dipped radial lead

(Halogen-free, automotive grade, high temperature application)

FA series (NP0, X8R)

FA16 [5.5x6.0 mm] FA11 [5.5x7.0 mm]

Туре:	Lead pitch	5.0 mm FA28 [4.0x5.5 mm] FA24 [4.5x5.5 mm] FA26 [5.5x6.0 mm] FA20 [5.5x7.0 mm] FA22 [7.5x8.5 mm] FA23 [8.5x11.0 mm]
	Lead pitch	2.5 mm FA18 [4.0x5.5 mm] FA14 [4.5x5.5 mm]



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REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using this products.

▲ REMINDERS

 The products listed in this specification are intended for use in automotive applications under normal operation and usage conditions. The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality requires a more stringent level of safety or reliability, or whose failure, malfunction or defect could cause serious damage to society, person or property.

Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below or for any other use exceeding the range or conditions set forth in this specification sheet. If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in this specification, please contact us.

- (1) Aerospace/aviation equipment
- (2) Transportation equipment (electric trains, ships, etc.)
- (3) Medical equipment (excepting Pharmaceutical Affairs Law classification Class1,2)
- (4) Power-generation control equipment
- (5) Atomic energy-related equipment
- (6) Seabed equipment
- (7) Transportation control equipment

- (8) Public information-processing equipment
- (9) Military equipment
- (10) Electric heating apparatus, burning equipment
- (11) Disaster prevention/crime prevention equipment
- (12) Safety equipment
- (13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.

In addition, although the products listed in this specification are intended for use in automotive applications as described above, they are not prohibited to use in general electronic equipment, whose performance and/or quality doesn't require a more stringent level of safety or reliability, or whose failure, malfunction or defect could not cause serious damage to society, person or property. Therefore, the description of this caution will be applied, when the products are used in general electronic equipment under a normal operation and usage conditions.

- 2. We may modify products or discontinue production of a product listed in this catalog without prior notification.
- 3. We provide "Delivery Specification" that explain precautions for the specifications and safety of each product listed in this catalog. We strongly recommend that you exchange these delivery specifications with customers that use one of these products.
- 4. If you plan to export a product listed in this catalog, keep in mind that it may be a restricted item according to the "Foreign Exchange and Foreign Trade Control Law". In such cases, it is necessary to acquire export permission in harmony with this law.
- 5. Any reproduction or transferring of the contents of this catalog is prohibited without prior permission from our company.
- 6. We are not responsible for problems that occur related to the intellectual property rights or other rights of our company or a third party when you use a product listed in this catalog. We do not grant license of these rights.
- 7. This catalog only applies to products purchased through our company or one of our company's official agencies. This catalog does not apply to products that are purchased through other third parties.

MLCC with dipped radial lead

Product compatible with RoHS directive Halogen-free

Halogen-free, automotive grade, high temperature application

Overview of the FA series

FEATURES

○ Operating temperature range: -55 to +150°C

- \bigcirc Voltage rating of 25V to 630V with capacitance range of 10pF to 4.7 μ F
- O AEC-Q200 compliant

APPLICATION

- \bigcirc Noise reduction measures for various motors for automotive use
- O Resonant circuits in areas such as keyless entry systems
- O Bypass capacitors and smoothing capacitors for switching power sources, etc.
- Snubber circuits
- PFC input filters

PART NUMBER CONSTRUCTION

FA		2		8		NP0	1	Н	1	00		D			
Series name		ad pitch (mm)		LxWxT dimensions (mm)	ter	pacitance nperature racteristics	vo	ated Itage (V)		ominal acitance		pacitance plerance	ernal ode	Ρ	Packaging style
	1	2.5	8	4.0x5.5x2.5	NP0	0±30ppm/°C	1E	25	100	10pF	D	±0.5pF		0	Bulk
	2	5.0	4	4.5x5.5x3.0	X8R	±15%	1H	50	101	100pF	J	±5%		6	Taping
			6	5.5x6.0x3.5			2A	100	102	1,000pF	κ	±10%			
			0	5.5x7.0x4.0			2E	250	105	1uF					
			1	5.5x7.0x4.0			2W	450							
			2	7.5x8.5x4.5			2J	630							
			3	8.5x11.0x5.5											

OPERATING TEMPERATURE RANGE

Canaaitanaa tamparatura	Temperature range*				
Capacitance temperature characteristics	Operating temperature (°C)	Storage temperature** (°C)			
NP0, X8R	–55 to +150	-55 to +150			
* =					

* The maximum operating temperature includes capacitor self-generated heat of up to 20°C.

**The storage temperature range is for after the circuit board is mounted.

O RoHS Directive Compliant Product: See the following for more details. https://product.tdk.com/info/en/environment/rohs/index.html

O Halogen-free: indicates that CI content is less than 900ppm, Br content is less than 900ppm, and that the total CI and Br content is less than 1500ppm.

Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.

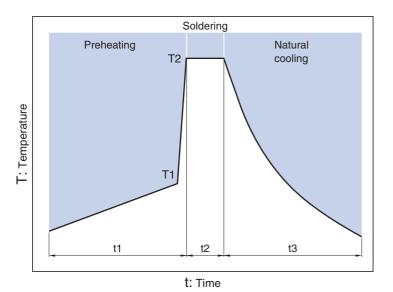
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Overview of the FA series

PACKAGE QUANTITY

Туре	Package quantity				
Type	Taping (pieces / box)	Bulk (pieces / bag)			
FA28	2000	500			
FA24	2000	500			
FA26	2000	500			
FA20	1500	500			
FA22	1000	500			
FA23	1000	200			
FA18	2000	500			
FA14	2000	500			
FA16	2000	500			
FA11	1500	500			

RECOMMENDED FLOW PROFILE



Preheating		Peak		Natural cooling
Temp.	Time	Temp.	Time	Time
T1	t1	T2	t2	t3
110°C min.	Over 60s.	260°C	Within 5s.	Over 60s.

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CAPACITORS

FA28 type

SHAPE & DIMENSIONS





Dimensions in mm

FA28 type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
NP0	10pF	±0.5pF	50	FA28NP01H100DNU0 **
NP0	15pF	±5%	50	FA28NP01H150JNU0
NP0	22pF	±5%	50	FA28NP01H220JNU0
NP0	33pF	±5%	50	FA28NP01H330JNU0
NP0	47pF	±5%	50	FA28NP01H470JNU0
NP0	68pF	±5%	50	FA28NP01H680JNU0
NP0	100pF	±5%	50	FA28NP01H101JNU0
NP0	120pF	±5%	50	FA28NP01H121JNU0
NP0	150pF	±5%	50	FA28NP01H151JNU0
NP0	180pF	±5%	50	FA28NP01H181JNU0
NP0	220pF	±5%	50	FA28NP01H221JNU0
NP0	270pF	±5%	50	FA28NP01H271JNU0
NP0	330pF	±5%	50	FA28NP01H331JNU0
NP0	390pF	±5%	50	FA28NP01H391JNU0
NP0	470pF	±5%	50	FA28NP01H471JNU0
NP0	560pF	±5%	50	FA28NP01H561JNU0
NP0	680pF	±5%	50	FA28NP01H681JNU0
NP0	820pF	±5%	50	FA28NP01H821JNU0
NP0	1nF	±5%	50	FA28NP01H102JNU0
NP0	1.2nF	±5%	50	FA28NP01H122JNU0
NP0	1.5nF	±5%	50	FA28NP01H152JNU0
NP0	1.8nF	±5%	50	FA28NP01H182JNU0
NP0	2.2nF	±5%	50	FA28NP01H222JNU0
NP0	2.7nF	±5%	50	FA28NP01H272JNU0
NP0	3.3nF	±5%	50	FA28NP01H332JNU0
NP0	3.9nF	±5%	50	FA28NP01H392JNU0
NP0	4.7nF	±5%	50	FA28NP01H472JNU0
NP0	5.6nF	±5%	50	FA28NP01H562JNU0
NP0	6.8nF	±5%	50	FA28NP01H682JNU0
NP0	8.2nF	±5%	50	FA28NP01H822JNU0
NP0	10nF	±5%	50	FA28NP01H103JNU0
NP0	10pF	±0.5pF	100	FA28NP02A100DNU0
NP0	15pF	±5%	100	FA28NP02A150JNU0
NP0	22pF	±5%	100	FA28NP02A220JNU0
NP0	33pF	±5%	100	FA28NP02A330JNU0
NP0	47pF	±5%	100	FA28NP02A470JNU0
NP0	68pF	±5%	100	FA28NP02A680JNU0
NP0	100pF	±5%	100	FA28NP02A101JNU0
NP0	120pF	±5%	100	FA28NP02A121JNU0
NP0	150pF	±5%	100	FA28NP02A151JNU0
NP0	180pF	±5%	100	FA28NP02A181JNU0
NP0	220pF	±5%	100	FA28NP02A221JNU0
NP0	270pF	±5%	100	FA28NP02A271JNU0
NP0	330pF	±5%	100	FA28NP02A331JNU0
NP0	390pF	±5%	100	FA28NP02A391JNU0
NP0	470pF	±5%	100	FA28NP02A471JNU0
NP0	560pF	±5%	100	FA28NP02A561JNU0
NP0	680pF	±5%	100	FA28NP02A681JNU0
NP0	820pF	±5%	100	FA28NP02A821JNU0
		±• /•		

* The part numbers are TDK's standard specification products.

** The " 🗌 " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).

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FA28 type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
NP0	1nF	±5%	100	FA28NP02A102JNU0 **
NP0	1.2nF	±5%	100	FA28NP02A122JNU0
NP0	1.5nF	±5%	100	FA28NP02A152JNU0
NP0	1.8nF	±5%	100	FA28NP02A182JNU0
NP0	2.2nF	±5%	100	FA28NP02A222JNU0
NP0	2.7nF	±5%	100	FA28NP02A272JNU0
NP0	3.3nF	±5%	100	FA28NP02A332JNU0
NP0	820pF	±5%	250	FA28NP02E821JNU0
NP0	1nF	±5%	250	FA28NP02E102JNU0
NP0	1.2nF	±5%	250	FA28NP02E122JNU0
NP0	1.5nF	±5%	250	FA28NP02E152JNU0
NP0	1.8nF	±5%	250	FA28NP02E182JNU0
NP0	2.2nF	±5%	250	FA28NP02E222JNU0

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FA28 type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
X8R	68nF	±10%	25	FA28X8R1E683KNU0 **
X8R	100nF	±10%	25	FA28X8R1E104KNU0
X8R	150nF	±10%	25	FA28X8R1E154KRU0
X8R	220nF	±10%	25	FA28X8R1E224KRU0
X8R	1nF	±10%	50	FA28X8R1H102KNU0
X8R	1.5nF	±10%	50	FA28X8R1H152KNU0
X8R	2.2nF	±10%	50	FA28X8R1H222KNU0
X8R	3.3nF	±10%	50	FA28X8R1H332KNU0
X8R	4.7nF	±10%	50	FA28X8R1H472KNU0
X8R	6.8nF	±10%	50	FA28X8R1H682KNU0
X8R	10nF	±10%	50	FA28X8R1H103KNU0
X8R	15nF	±10%	50	FA28X8R1H153KNU0
X8R	22nF	±10%	50	FA28X8R1H223KNU0
X8R	33nF	±10%	50	FA28X8R1H333KNU0
X8R	47nF	±10%	50	FA28X8R1H473KNU0
X8R	68nF	±10%	50	FA28X8R1H683KRU0
X8R	100nF	±10%	50	FA28X8R1H104KRU0
X8R	1nF	±10%	100	FA28X8R2A102KNU0
X8R	1.5nF	±10%	100	FA28X8R2A152KNU0
X8R	2.2nF	±10%	100	FA28X8R2A222KNU0
X8R	3.3nF	±10%	100	FA28X8R2A332KNU0
X8R	4.7nF	±10%	100	FA28X8R2A472KNU0
X8R	6.8nF	±10%	100	FA28X8R2A682KNU0
X8R	10nF	±10%	100	FA28X8R2A103KNU0
X8R	15nF	±10%	100	FA28X8R2A153KNU0
X8R	22nF	±10%	100	FA28X8R2A223KRU0
X8R	33nF	±10%	100	FA28X8R2A333KRU0

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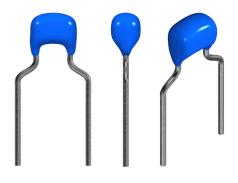
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CAPACITORS

FA24 type

SHAPE & DIMENSIONS





Dimensions in mm

FA24 type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
NP0	15nF	±5%	50	FA24NP01H153JNU0 **
NP0	22nF	±5%	50	FA24NP01H223JNU0
NP0	33nF	±5%	50	FA24NP01H333JNU0
NP0	3.9nF	±5%	100	FA24NP02A392JNU0
NP0	4.7nF	±5%	100	FA24NP02A472JNU0
NP0	5.6nF	±5%	100	FA24NP02A562JNU0
NP0	6.8nF	±5%	100	FA24NP02A682JNU0
NP0	8.2nF	±5%	100	FA24NP02A822JNU0
NP0	10nF	±5%	100	FA24NP02A103JNU0
NP0	3.3nF	±5%	250	FA24NP02E332JNU0
NP0	3.9nF	±5%	250	FA24NP02E392JNU0
NP0	4.7nF	±5%	250	FA24NP02E472JNU0
NP0	5.6nF	±5%	250	FA24NP02E562JNU0
NP0	6.8nF	±5%	250	FA24NP02E682JNU0
NP0	8.2nF	±5%	250	FA24NP02E822JNU0
NP0	10nF	±5%	250	FA24NP02E103JNU0
NP0	100pF	±5%	450	FA24NP02W101JNU0
NP0	120pF	±5%	450	FA24NP02W121JNU0
NP0	150pF	±5%	450	FA24NP02W151JNU0
NP0	180pF	±5%	450	FA24NP02W181JNU0
NP0	220pF	±5%	450	FA24NP02W221JNU0
NP0	270pF	±5%	450	FA24NP02W271JNU0
NP0	330pF	±5%	450	FA24NP02W331JNU0
NP0	390pF	±5%	450	FA24NP02W391JNU0
NP0	470pF	±5%	450	FA24NP02W471JNU0
NP0	560pF	±5%	450	FA24NP02W561JNU0
NP0	680pF	±5%	450	FA24NP02W681JNU0
NP0	820pF	±5%	450	FA24NP02W821JNU0
NP0	1nF	±5%	450	FA24NP02W102JNU0
NP0	1.2nF	±5%	450	FA24NP02W122JNU0
NP0	1.5nF	±5%	450	FA24NP02W152JNU0
NP0	1.8nF	±5%	450	FA24NP02W182JNU0
NP0	2.2nF	±5%	450	FA24NP02W222JNU0
NP0	2.7nF	±5%	450	FA24NP02W272JNU0
NP0	3.3nF	±5%	450	FA24NP02W332JNU0
NP0	3.9nF	±5%	450	FA24NP02W392JNU0
NP0	4.7nF	±5%	450	FA24NP02W472JNU0
NP0	5.6nF	±5%	450	FA24NP02W562JNU0
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CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
X8R	150nF	±10%	25	FA24X8R1E154KNU0 **
X8R	220nF	±10%	25	FA24X8R1E224KNU0
X8R	330nF	±10%	25	FA24X8R1E334KNU0
X8R	470nF	±10%	25	FA24X8R1E474KRU0
X8R	68nF	±10%	50	FA24X8R1H683KNU0
X8R	100nF	±10%	50	FA24X8R1H104KNU0
X8R	150nF	±10%	50	FA24X8R1H154KRU0
X8R	220nF	±10%	50	FA24X8R1H224KRU0
X8R	22nF	±10%	100	FA24X8R2A223KNU0
X8R	47nF	±10%	100	FA24X8R2A473KRU0
X8R	68nF	±10%	100	FA24X8R2A683KRU0

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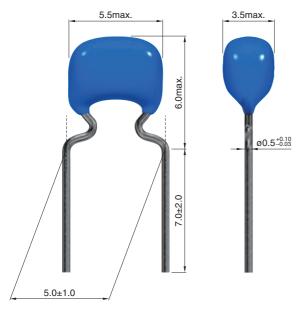
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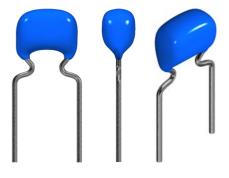
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CAPACITORS

FA26 type

SHAPE & DIMENSIONS





Dimensions in mm

FA26 type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
NP0	47nF	±5%	50	FA26NP01H473JNU0 **
NP0	68nF	±5%	50	FA26NP01H683JNU0
NP0	100nF	±5%	50	FA26NP01H104JNU0
NP0	15nF	±5%	100	FA26NP02A153JNU0
NP0	22nF	±5%	100	FA26NP02A223JNU0
NP0	33nF	±5%	100	FA26NP02A333JNU0
NP0	15nF	±5%	250	FA26NP02E153JNU0
NP0	22nF	±5%	250	FA26NP02E223JNU0
NP0	6.8nF	±5%	450	FA26NP02W682JNU0
NP0	8.2nF	±5%	450	FA26NP02W822JNU0
NP0	10nF	±5%	450	FA26NP02W103JNU0
NP0	15nF	±5%	450	FA26NP02W153JNU0
NP0	3.9nF	±5%	630	FA26NP02J392JNU0
NP0	4.7nF	±5%	630	FA26NP02J472JNU0
NP0	5.6nF	±5%	630	FA26NP02J562JNU0
NP0	6.8nF	±5%	630	FA26NP02J682JNU0
NP0	8.2nF	±5%	630	FA26NP02J822JNU0
NP0	10nF	±5%	630	FA26NP02J103JNU0

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CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
X8R	470nF	±10%	25	FA26X8R1E474KNU0 **
X8R	680nF	±10%	25	FA26X8R1E684KNU0
X8R	1uF	±10%	25	FA26X8R1E105KNU0
X8R	1.5uF	±10%	25	FA26X8R1E155KRU0
X8R	2.2uF	±10%	25	FA26X8R1E225KRU0
X8R	150nF	±10%	50	FA26X8R1H154KNU0
X8R	220nF	±10%	50	FA26X8R1H224KNU0
X8R	330nF	±10%	50	FA26X8R1H334KNU0
X8R	470nF	±10%	50	FA26X8R1H474KNU0
X8R	680nF	±10%	50	FA26X8R1H684KRU0
X8R	1uF	±10%	50	FA26X8R1H105KRU0
X8R	33nF	±10%	100	FA26X8R2A333KNU0
X8R	47nF	±10%	100	FA26X8R2A473KNU0
X8R	68nF	±10%	100	FA26X8R2A683KNU0
X8R	100nF	±10%	100	FA26X8R2A104KNU0
X8R	150nF	±10%	100	FA26X8R2A154KNU0
X8R	220nF	±10%	100	FA26X8R2A224KRU0
X8R	330nF	±10%	100	FA26X8R2A334KRU0

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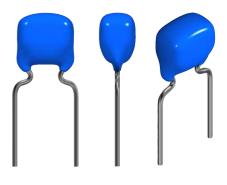
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CAPACITORS

FA20 type

SHAPE & DIMENSIONS





Dimensions in mm

FA20 type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
NP0	68nF	±5%	100	FA20NP02A683JNU0 **
NP0	33nF	±5%	250	FA20NP02E333JNU0
NP0	47nF	±5%	250	FA20NP02E473JNU0
NP0	22nF	±5%	450	FA20NP02W223JNU0
NP0	33nF	±5%	450	FA20NP02W333JNU0
NP0	15nF	±5%	630	FA20NP02J153JNU0
NP0	22nF	±5%	630	FA20NP02J223JNU0
NP0	33nF	±5%	630	FA20NP02J333JNU0

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CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
X8R	1.5uF	±10%	25	FA20X8R1E155KNU0 **
X8R	2.2uF	±10%	25	FA20X8R1E225KNU0
X8R	3.3uF	±10%	25	FA20X8R1E335KNU0
X8R	4.7uF	±10%	25	FA20X8R1E475KRU0
X8R	470nF	±10%	100	FA20X8R2A474KRU0
X8R	680nF	±10%	100	FA20X8R2A684KRU0

* The part numbers are TDK's standard specification products.

** The " 🗌 " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).



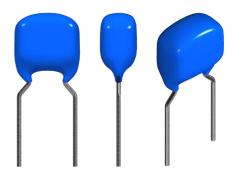
⊗TDK

CAPACITORS

FA22 type

SHAPE & DIMENSIONS





Dimensions in mm

FA22 type

ELECTRICAL CHARACTERISTICS

□CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
NP0	68nF	±5%	250	FA22NP02E683JRU0 =**
NP0	100nF	±5%	250	FA22NP02E104JRU0
NP0	47nF	±5%	450	FA22NP02W473JNU0
NP0	68nF	±5%	450	FA22NP02W683JNU0
NP0	47nF	±5%	630	FA22NP02J473JNU0

* The part numbers are TDK's standard specification products.

** The " \square " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).

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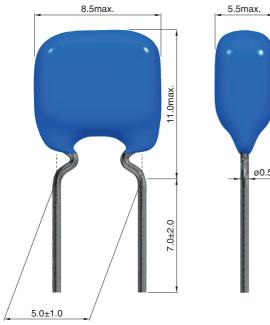
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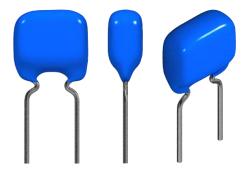
CAPACITORS

FA23 type

SHAPE & DIMENSIONS







Dimensions in mm

FA23 type

ELECTRICAL CHARACTERISTICS

□CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
NP0	150nF	±5%	100	FA23NP02A154JNU0 **
NP0	150nF	±5%	250	FA23NP02E154JRU0
NP0	100nF	±5%	450	FA23NP02W104JNU0

* The part numbers are TDK's standard specification products.

** The " 🗌 " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).

(19/28)

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CAPACITORS

FA18 type

SHAPE & DIMENSIONS



Dimensions in mm



FA18 type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
NP0	10pF	±0.5pF	50	FA18NP01H100DNU0 **
NP0	15pF	±5%	50	FA18NP01H150JNU0
NP0	22pF	±5%	50	FA18NP01H220JNU0
NP0	33pF	±5%	50	FA18NP01H330JNU0
NP0	47pF	±5%	50	FA18NP01H470JNU0
NP0	68pF	±5%	50	FA18NP01H680JNU0
NP0	100pF	±5%	50	FA18NP01H101JNU0
NP0	120pF	±5%	50	FA18NP01H121JNU0
NP0	150pF	±5%	50	FA18NP01H151JNU0
NP0	180pF	±5%	50	FA18NP01H181JNU0
NP0	220pF	±5%	50	FA18NP01H221JNU0
NP0	270pF	±5%	50	FA18NP01H271JNU0
NP0	330pF	±5%	50	FA18NP01H331JNU0
NP0	390pF	±5%	50	FA18NP01H391JNU0
NP0	470pF	±5%	50	FA18NP01H471JNU0
NP0	560pF	±5%	50	FA18NP01H561JNU0
NP0	680pF	±5%	50	FA18NP01H681JNU0
NP0	820pF	±5%	50	FA18NP01H821JNU0
NP0	1nF	±5%	50	FA18NP01H102JNU0
NP0	1.2nF	±5%	50	FA18NP01H122JNU0
NP0	1.5nF	±5%	50	FA18NP01H152JNU0
NP0	1.8nF	±5%	50	FA18NP01H182JNU0
NP0	2.2nF	±5%	50	FA18NP01H222JNU0
NP0	2.7nF	±5%	50	FA18NP01H272JNU0
NP0	3.3nF	±5%	50	FA18NP01H332JNU0
NP0	3.9nF	±5%	50	FA18NP01H392JNU0
NP0	4.7nF	±5%	50	FA18NP01H472JNU0
NP0	5.6nF	±5%	50	FA18NP01H562JNU0
NP0	6.8nF	±5%	50	FA18NP01H682JNU0
NP0	8.2nF	±5%	50	FA18NP01H822JNU0
NP0	10nF	±5%	50	FA18NP01H103JNU0
NP0	10pF	±0.5pF	100	FA18NP02A100DNU0
NP0	15pF	±5%	100	FA18NP02A150JNU0
NP0	22pF	±5%	100	FA18NP02A220JNU0
NP0	33pF	±5%	100	FA18NP02A330JNU0
NP0	47pF	±5%	100	FA18NP02A470JNU0
NP0	68pF	±5%	100	FA18NP02A680JNU0
NP0	100pF	±5%	100	FA18NP02A101JNU0
NP0	120pF	±5%	100	FA18NP02A121JNU0
NP0	150pF	±5%	100	FA18NP02A151JNU0
NP0	180pF	±5%	100	FA18NP02A181JNU0
NP0	220pF	±5%	100	FA18NP02A221JNU0
NP0	270pF	±5%	100	FA18NP02A271JNU0
NP0	330pF	±5%	100	FA18NP02A331JNU0
NP0	390pF	±5%	100	FA18NP02A391JNU0
NP0	470pF	±5%	100	FA18NP02A471JNU0
NP0	560pF	±5%	100	FA18NP02A561JNU0
NP0	680pF	±5%	100	FA18NP02A681JNU0
NP0	820pF	±5%	100	FA18NP02A881JNU0
NP0	1nF	±5%	100	FA18NP02A102JNU0
NP0	1.2nF	<u>±5%</u> ±5%	100	
NP0	1.5nF	±5%	100	FA18NP02A122JNU0
NP0	1.8nF	<u>±5%</u> ±5%	100	FA18NP02A152JN00
NP0	2.2nF		100	
NP0	2.20F	±5%	100	
NP0		±5%	100	
	3.3nF	±5% d specification produ		FA18NP02A332JNU0

 * The part numbers are TDK's standard specification products.

** The " \square " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).

FA18 type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
X8R	68nF	±10%	25	FA18X8R1E683KNU0 **
X8R	100nF	±10%	25	FA18X8R1E104KNU0
X8R	150nF	±10%	25	FA18X8R1E154KRU0
X8R	220nF	±10%	25	FA18X8R1E224KRU0
X8R	1nF	±10%	50	FA18X8R1H102KNU0
X8R	1.5nF	±10%	50	FA18X8R1H152KNU0
X8R	2.2nF	±10%	50	FA18X8R1H222KNU0
X8R	3.3nF	±10%	50	FA18X8R1H332KNU0
X8R	4.7nF	±10%	50	FA18X8R1H472KNU0
X8R	6.8nF	±10%	50	FA18X8R1H682KNU0
X8R	10nF	±10%	50	FA18X8R1H103KNU0
X8R	15nF	±10%	50	FA18X8R1H153KNU0
X8R	22nF	±10%	50	FA18X8R1H223KNU0
X8R	33nF	±10%	50	FA18X8R1H333KNU0
X8R	47nF	±10%	50	FA18X8R1H473KNU0
X8R	68nF	±10%	50	FA18X8R1H683KRU0
X8R	100nF	±10%	50	FA18X8R1H104KRU0
X8R	1nF	±10%	100	FA18X8R2A102KNU0
X8R	1.5nF	±10%	100	FA18X8R2A152KNU0
X8R	2.2nF	±10%	100	FA18X8R2A222KNU0
X8R	3.3nF	±10%	100	FA18X8R2A332KNU0
X8R	4.7nF	±10%	100	FA18X8R2A472KNU0
X8R	6.8nF	±10%	100	FA18X8R2A682KNU0
X8R	10nF	±10%	100	FA18X8R2A103KNU0
X8R	15nF	±10%	100	FA18X8R2A153KNU0
X8R	22nF	±10%	100	FA18X8R2A223KRU0
X8R	33nF	±10%	100	FA18X8R2A333KRU0

 * The part numbers are TDK's standard specification products.

** The " 🗌 " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).

(22/28)

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CAPACITORS

FA14 type

SHAPE & DIMENSIONS





FA14 type

ELECTRICAL CHARACTERISTICS

□CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
NP0	15nF	±5%	50	FA14NP01H153JNU0 ^{**}
NP0	22nF	±5%	50	FA14NP01H223JNU0
NP0	33nF	±5%	50	FA14NP01H333JNU0
NP0	3.9nF	±5%	100	FA14NP02A392JNU0
NP0	4.7nF	±5%	100	FA14NP02A472JNU0
NP0	5.6nF	±5%	100	FA14NP02A562JNU0
NP0	6.8nF	±5%	100	FA14NP02A682JNU0
NP0	8.2nF	±5%	100	FA14NP02A822JNU0
NP0	10nF	±5%	100	FA14NP02A103JNU0

* The part numbers are TDK's standard specification products.

** The " 🗌 " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).

CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
X8R	150nF	±10%	25	FA14X8R1E154KNU0 **
X8R	220nF	±10%	25	FA14X8R1E224KNU0
X8R	330nF	±10%	25	FA14X8R1E334KNU0
X8R	470nF	±10%	25	FA14X8R1E474KRU0
X8R	68nF	±10%	50	FA14X8R1H683KNU0
X8R	100nF	±10%	50	FA14X8R1H104KNU0
X8R	150nF	±10%	50	FA14X8R1H154KRU0
X8R	220nF	±10%	50	FA14X8R1H224KRU0
X8R	22nF	±10%	100	FA14X8R2A223KNU0
X8R	47nF	±10%	100	FA14X8R2A473KRU0
X8R	68nF	±10%	100	FA14X8R2A683KRU0

* The part numbers are TDK's standard specification products.

** The " 🗌 " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).



(24/28)

公TDK

CAPACITORS

FA16 type

SHAPE & DIMENSIONS





FA16 type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
NP0	47nF	±5%	50	FA16NP01H473JNU0 ^{**}
NP0	68nF	±5%	50	FA16NP01H683JNU0
NP0	100nF	±5%	50	FA16NP01H104JNU0
NP0	15nF	±5%	100	FA16NP02A153JNU0
NP0	22nF	±5%	100	FA16NP02A223JNU0
NP0	33nF	±5%	100	FA16NP02A333JNU0

* The part numbers are TDK's standard specification products.

** The " 🗌 " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).

CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
X8R	470nF	±10%	25	FA16X8R1E474KNU0 **
X8R	680nF	±10%	25	FA16X8R1E684KNU0
X8R	1uF	±10%	25	FA16X8R1E105KNU0
X8R	1.5uF	±10%	25	FA16X8R1E155KRU0
X8R	2.2uF	±10%	25	FA16X8R1E225KRU0
X8R	150nF	±10%	50	FA16X8R1H154KNU0
X8R	220nF	±10%	50	FA16X8R1H224KNU0
X8R	330nF	±10%	50	FA16X8R1H334KNU0
X8R	470nF	±10%	50	FA16X8R1H474KNU0
X8R	680nF	±10%	50	FA16X8R1H684KRU0
X8R	1uF	±10%	50	FA16X8R1H105KRU0
X8R	33nF	±10%	100	FA16X8R2A333KNU0
X8R	47nF	±10%	100	FA16X8R2A473KNU0
X8R	68nF	±10%	100	FA16X8R2A683KNU0
X8R	100nF	±10%	100	FA16X8R2A104KNU0
X8R	150nF	±10%	100	FA16X8R2A154KNU0
X8R	220nF	±10%	100	FA16X8R2A224KRU0
X8R	330nF	±10%	100	FA16X8R2A334KRU0

* The part numbers are TDK's standard specification products.

** The " 🗌 " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).

A Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.

*****<u>⊗</u>TDK*

(26/28)

⊗TDK

CAPACITORS

FA11 type

SHAPE & DIMENSIONS





Dimensions in mm

CAPACITORS

FA11 type

ELECTRICAL CHARACTERISTICS

□CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
NP0	68nF	±5%	100	FA11NP02A683JNU0 **

* The part numbers are TDK's standard specification products.

** The " 🗌 " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).

CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*
X8R	1.5uF	±10%	25	FA11X8R1E155KNU0 **
X8R	2.2uF	±10%	25	FA11X8R1E225KNU0
X8R	3.3uF	±10%	25	FA11X8R1E335KNU0
X8R	4.7uF	±10%	25	FA11X8R1E475KRU0
X8R	470nF	±10%	100	FA11X8R2A474KRU0
X8R	680nF	±10%	100	FA11X8R2A684KRU0

 * The part numbers are TDK's standard specification products.

** The "
] " of the Part Number contains the packaging symbol, 0 (Bulk packaging) or 6 (Taping packaging).

(27/28)

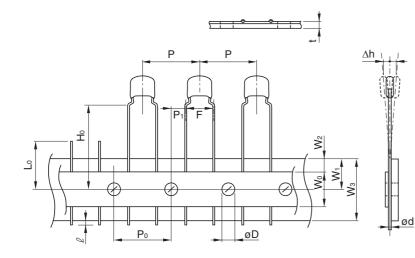


Packaging style

TAPING DIMENSIONS

Lead pitch 5.0 mm

(FA28, FA24, FA26, FA20, FA22, FA23 type)



Symbol	Dimensions in mm
Р	(12.7)
Po*1	(12.7)
P1	(3.85)
Wo	12.0±1.0
W1	9.0±0.5
W2*2	3.0max.
Wз	18.0+1.0, -0.5
Ho	16.0±0.8
l t	1.0max.
t	0.6±0.2
Lo*3	11.0max.
F	5.0+0.8, -0.2
ød	ø0.5+0.1, -0.03
øD	(ø4.0)
Δh	(±2)

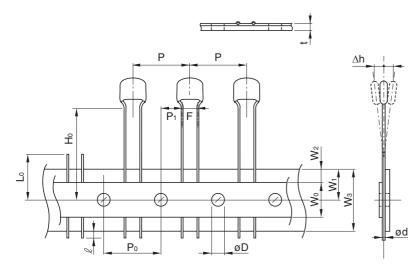
The values in parentheses "()" are reference values.

*1 Accumulated pitch tolerance shall be $\pm 2mm$ for 20 pitches.

*2 Adhesive tape shall not stick out from carrier tape.

*3 The number of consecutive gaps in the product shall be three or less.

Lead pitch 2.5 mm (FA18, FA14, FA16, FA11 type)



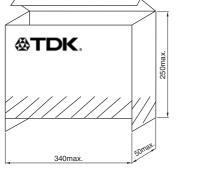
Symbol	Dimensions in mm
Р	(12.7)
Po*1	(12.7)
P1	(5.1)
Wo	12.0±1.0
W 1	9.0±0.5
W2*2	3.0max.
Wз	18.0+1.0, -0.5
Ho	16.0±0.8
l t	1.0max.
t	0.6±0.2
Lo*3	11.0max.
F	2.5+0.5, -0.2
ød	ø0.5+0.1, –0.03
øD	(ø4.0)
Δh	(±2)

The values in parentheses "()" are reference values.

*¹ Accumulated pitch tolerance shall be $\pm 2mm$ for 20 pitches.

*2 Adhesive tape shall not stick out from carrier tape.

*3 The number of consecutive gaps in the product shall be three or less.



AMMO PACK INNER BOX SIZE

Dimensions in mm



单击下面可查看定价,库存,交付和生命周期等信息

>>TDK Corporation