

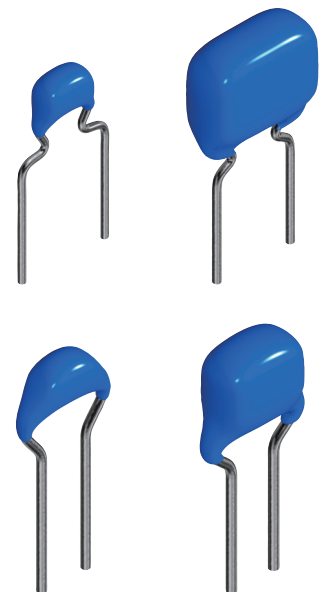
## MLCC with dipped radial lead

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

# FA series (NP0, X8R)

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Type:	Lead pitch	5.0 mm
		FA28 [4.0x5.5mm]
		FA24 [4.5x5.5mm]
		FA26 [5.5x6.0mm]
		FA20 [5.5x7.0mm]
		FA22 [7.5x8.5mm]
		FA23 [8.5x11.0mm]
	Lead pitch	2.5 mm
		FA18 [4.0x5.5mm]
		FA14 [4.5x5.5mm]
		FA16 [5.5x6.0mm]
		FA11 [5.5x7.0mm]



## 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

1. 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   | (7) Transportation control equipment   |
| (2) Transportation equipment (electric trains, ships, etc.)                          | (8) Public information-processing equipment                                  |
| (3) Medical equipment (excepting Pharmaceutical Affairs Law classification Class1,2) | (9) Military equipment   |
| (4) Power-generation control equipment   | (10) Electric heating apparatus, burning equipment                           |
| (5) Atomic energy-related equipment  | (11) Disaster prevention/crime prevention equipment                          |
| (6) Seabed 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
- Voltage rating of 25V to 630V with capacitance range of 10pF to 4.7μF
- Qualified based on AEC-Q200

### APPLICATION

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

### PART NUMBER CONSTRUCTION

FA	2	8	NP0	1H	100	D	□□□	□
Series name	Lead pitch (mm)	LxWxT Dimensions (mm)	Capacitance temperature characteristics	Rated voltage (V)	Nominal capacitance	Capacitance tolerance	Internal code	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	K   ±10%		
		0   5.5x7.0x4.0		2E   250	105   1μF			
		1   5.5x7.0x4.0		2W   450				
		2   7.5x8.5x4.5		2J   630				
		3   8.5x11.0x5.5						

### OPERATING TEMPERATURE RANGE

Capacitance temperature characteristics	Temperature range*	
	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 assembly.

- RoHS Directive Compliant Product: See the following for more details. <https://product.tdk.com/en/environment/rohs/index.html>
- Halogen-free: indicates that Cl content is less than 900ppm, Br content is less than 900ppm, and that the total Cl and Br content is less than 1500ppm.

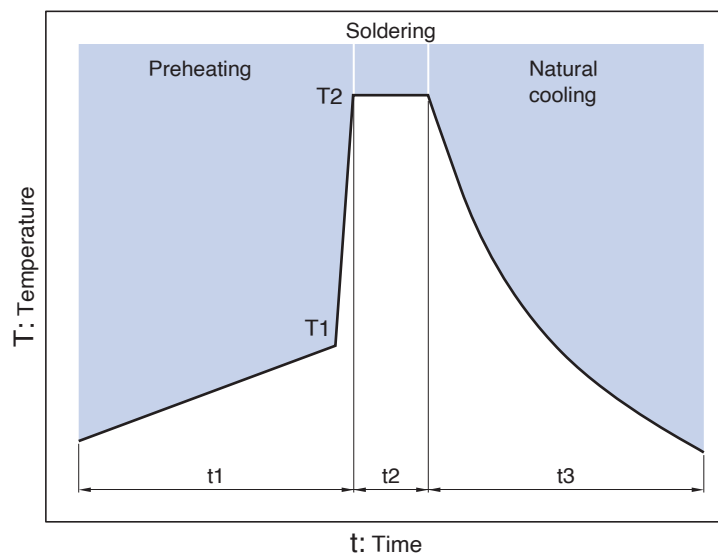
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# Overview of the FA series

## PACKAGE QUANTITY

Type	Package quantity	
	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.

# MLCC with dipped radial lead

Product compatible with RoHS directive  
Halogen-free


Halogen-free, automotive grade, high temperature application


## Capacitance range chart

## FA28 type

Capacitance		NPO			X8R		
(pF)	Code	2E (250V)	2A (100V)	1H (50V)	2A (100V)	1H (50V)	1E (25V)
10	100						
15	150						
22	220						
33	330						
47	470						
68	680						
100	101						
120	121						
150	151						
180	181						
220	221						
270	271						
330	331						
390	391						
470	471						
560	561						
680	681						
820	821						
1,000	102						
1,200	122						
1,500	152						
1,800	182						
2,200	222						
2,700	272						
3,300	332						
3,900	392						
4,700	472						
5,600	562						
6,800	682						
8,200	822						
10,000	103						
12,000	123						
15,000	153						
18,000	183						
22,000	223						
27,000	273						
33,000	333						
39,000	393						
47,000	473						
56,000	563						
68,000	683						
82,000	823						
100,000	104						
120,000	124						
150,000	154						
180,000	184						
220,000	224						

 Background gray: These products are not recommended for new designs.

 Click the charts for details.

 For details such as the catalog numbers, please refer to the capacitance range table on page 13 and after.

# MLCC with dipped radial lead

Product compatible with RoHS directive  
Halogen-free

## Halogen-free, automotive grade, high temperature application

### Capacitance range chart

### FA24 type

Capacitance		NPO				X8R		
(pF)	Code	2W (450V)	2E (250V)	2A (100V)	1H (50V)	2A (100V)	1H (50V)	1E (25V)
100	101	█						
120	121	█						
150	151	█						
180	181	█						
220	221	█						
270	271	█						
330	331	█						
390	391	█						
470	471	█						
560	561	█						
680	681	█						
820	821	█						
1,000	102	█						
1,200	122	█						
1,500	152	█						
1,800	182	█						
2,200	222	█						
2,700	272	█						
3,300	332	█	█					
3,900	392	█	█	█				
4,700	472	█	█	█				
5,600	562	█	█	█				
6,800	682	█	█	█				
8,200	822	█	█	█				
10,000	103	█	█	█	█			
15,000	153	█	█	█	█	█		
22,000	223	█	█	█	█	█	█	
33,000	333	█	█	█	█	█	█	█
47,000	473	█	█	█	█	█	█	█
68,000	683	█	█	█	█	█	█	█
100,000	104	█	█	█	█	█	█	█
150,000	154	█	█	█	█	█	█	█
220,000	224	█	█	█	█	█	█	█
330,000	334	█	█	█	█	█	█	█
470,000	474	█	█	█	█	█	█	█

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Halogen-free, automotive grade, high temperature application

## Capacitance range chart

## FA26 type

Capacitance		NPO					X8R		
(pF)	Code	2J (630V)	2W (450V)	2E (250V)	2A (100V)	1H (50V)	2A (100V)	1H (50V)	1E (25V)
3,900	392	■							
4,700	472								
5,600	562								
6,800	682	■							
8,200	822		■						
10,000	103								
15,000	153			■	■				
22,000	223								
33,000	333								
47,000	473					■	■		
68,000	683								
100,000	104					■	■		
150,000	154							■	
220,000	224								
330,000	334								
470,000	474								
680,000	684								
1,000,000	105								
1,500,000	155								
2,200,000	225								■

■ Background gray: These products are not recommended for new designs.

■ Click the charts for details.

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## Capacitance range chart

## FA20 type

Capacitance		NPO				X8R	
(pF)	Code	2J (630V)	2W (450V)	2E (250V)	2A (100V)	2A (100V)	1E (25V)
15,000	153	■					
22,000	223		■				
33,000	333			■			
47,000	473						
68,000	683				■		
100,000	104						
150,000	154						
220,000	224						
330,000	334						
470,000	474					■	
680,000	684						
1,000,000	105						
1,500,000	155						
2,200,000	225						
3,300,000	335						
4,700,000	475						■

■ Click the charts for details.

■ For details such as the catalog numbers, please refer to the capacitance range table on page 13 and after.

# MLCC with dipped radial lead

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Halogen-free, automotive grade, high temperature application

## Capacitance range chart

## FA22 type

Capacitance		NPO		
(pF)	Code	2J (630V)	2W (450V)	2E (250V)
47,000	473			
68,000	683			
100,000	104			

■ Click the charts for details.

■ For details such as the catalog numbers, please refer to the capacitance range table on page 13 and after.

## Capacitance range chart

## FA23 type

Capacitance		NPO		
(pF)	Code	2W (450V)	2E (250V)	2A (100V)
100,000	104			
150,000	154			

■ Click the charts for details.

■ For details such as the catalog numbers, please refer to the capacitance range table on page 13 and after.



# MLCC with dipped radial lead

Product compatible with RoHS directive  
Halogen-free

## Halogen-free, automotive grade, high temperature application

### Capacitance range chart

### FA18 type

Capacitance		NPO		X8R		
(pF)	Code	2A (100V)	1H (50V)	2A (100V)	1H (50V)	1E (25V)
10	100	█	█			
15	150	█	█			
22	220	█	█			
33	330	█	█			
47	470	█	█			
68	680	█	█			
100	101	█	█			
120	121	█	█			
150	151	█	█			
180	181	█	█			
220	221	█	█			
270	271	█	█			
330	331	█	█			
390	391	█	█			
470	471	█	█			
560	561	█	█			
680	681	█	█			
820	821	█	█			
1,000	102	█	█	█	█	
1,200	122	█	█	█	█	
1,500	152	█	█	█	█	
1,800	182	█	█	█	█	
2,200	222	█	█	█	█	
2,700	272	█	█	█	█	
3,300	332	█	█	█	█	
3,900	392	█	█	█	█	
4,700	472	█	█	█	█	
5,600	562	█	█	█	█	
6,800	682	█	█	█	█	
8,200	822	█	█	█	█	
10,000	103	█	█	█	█	
12,000	123	█	█	█	█	
15,000	153	█	█	█	█	
18,000	183	█	█	█	█	
22,000	223	█	█	█	█	
27,000	273	█	█	█	█	
33,000	333	█	█	█	█	
39,000	393	█	█	█	█	
47,000	473	█	█	█	█	
56,000	563	█	█	█	█	
68,000	683	█	█	█	█	█
82,000	823	█	█	█	█	█
100,000	104	█	█	█	█	█
120,000	124	█	█	█	█	█
150,000	154	█	█	█	█	█
180,000	184	█	█	█	█	█
220,000	224	█	█	█	█	█

- █ Background gray: These products are not recommended for new designs.
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Halogen-free, automotive grade, high temperature application

## Capacitance range chart

## FA14 type

Capacitance		NPO		X8R		
(pF)	Code	2A (100V)	1H (50V)	2A (100V)	1H (50V)	1E (25V)
3,900	392					
4,700	472					
5,600	562					
6,800	682					
8,200	822					
10,000	103					
15,000	153					
22,000	223					
33,000	333					
47,000	473					
68,000	683					
100,000	104					
150,000	154					
220,000	224					
330,000	334					
470,000	474					

Background gray: These products are not recommended for new designs.

Click the charts for details.

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## Capacitance range chart

## FA16 type

Capacitance		NPO		X8R		
(pF)	Code	2A (100V)	1H (50V)	2A (100V)	1H (50V)	1E (25V)
15,000	153					
22,000	223					
33,000	333					
47,000	473					
68,000	683					
100,000	104					
150,000	154					
220,000	224					
330,000	334					
470,000	474					
680,000	684					
1,000,000	105					
1,500,000	155					
2,200,000	225					

Background gray: These products are not recommended for new designs.

Click the charts for details.

For details such as the catalog numbers, please refer to the capacitance range table on page 13 and after.

# MLCC with dipped radial lead

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Halogen-free, automotive grade, high temperature application

## Capacitance range chart

## FA11 type

Capacitance		NPO		X8R	
(pF)	Code	2A (100V)	2A (100V)	1E (25V)	
68,000	683	■			
100,000	104				
150,000	154				
220,000	224				
330,000	334				
470,000	474		■		
680,000	684		■		
1,000,000	105				
1,500,000	155				■
2,200,000	225				
3,300,000	335				
4,700,000	475				

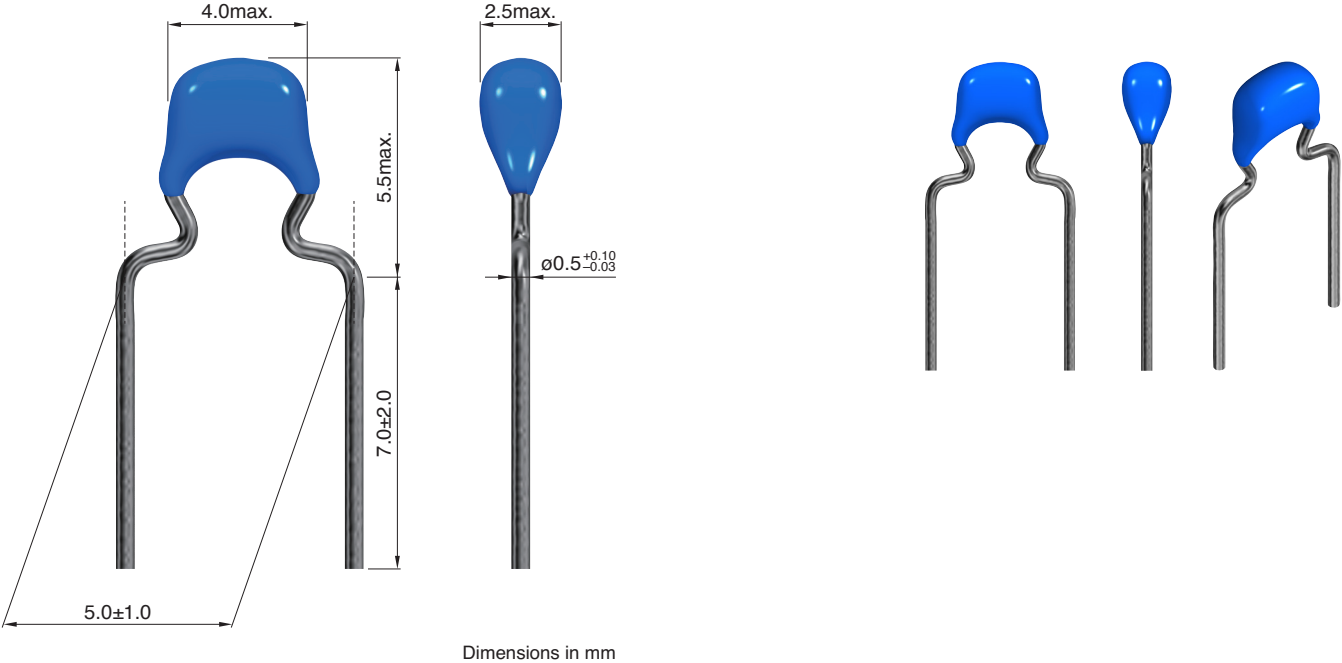
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# FA28 type

## ■ SHAPE & DIMENSIONS



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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.*	
				Separate	Taping
NPO	10pF	±0.5pF	50	<a href="#">FA28NP01H100DNU00</a>	<a href="#">FA28NP01H100DNU06</a>
NPO	15pF	±5%	50	<a href="#">FA28NP01H150JNU00</a>	<a href="#">FA28NP01H150JNU06</a>
NPO	22pF	±5%	50	<a href="#">FA28NP01H220JNU00</a>	<a href="#">FA28NP01H220JNU06</a>
NPO	33pF	±5%	50	<a href="#">FA28NP01H330JNU00</a>	<a href="#">FA28NP01H330JNU06</a>
NPO	47pF	±5%	50	<a href="#">FA28NP01H470JNU00</a>	<a href="#">FA28NP01H470JNU06</a>
NPO	68pF	±5%	50	<a href="#">FA28NP01H680JNU00</a>	<a href="#">FA28NP01H680JNU06</a>
NPO	100pF	±5%	50	<a href="#">FA28NP01H101JNU00</a>	<a href="#">FA28NP01H101JNU06</a>
NPO	120pF	±5%	50	<a href="#">FA28NP01H121JNU00</a>	<a href="#">FA28NP01H121JNU06</a>
NPO	150pF	±5%	50	<a href="#">FA28NP01H151JNU00</a>	<a href="#">FA28NP01H151JNU06</a>
NPO	180pF	±5%	50	<a href="#">FA28NP01H181JNU00</a>	<a href="#">FA28NP01H181JNU06</a>
NPO	220pF	±5%	50	<a href="#">FA28NP01H221JNU00</a>	<a href="#">FA28NP01H221JNU06</a>
NPO	270pF	±5%	50	<a href="#">FA28NP01H271JNU00</a>	<a href="#">FA28NP01H271JNU06</a>
NPO	330pF	±5%	50	<a href="#">FA28NP01H331JNU00</a>	<a href="#">FA28NP01H331JNU06</a>
NPO	390pF	±5%	50	<a href="#">FA28NP01H391JNU00</a>	<a href="#">FA28NP01H391JNU06</a>
NPO	470pF	±5%	50	<a href="#">FA28NP01H471JNU00</a>	<a href="#">FA28NP01H471JNU06</a>
NPO	560pF	±5%	50	<a href="#">FA28NP01H561JNU00</a>	<a href="#">FA28NP01H561JNU06</a>
NPO	680pF	±5%	50	<a href="#">FA28NP01H681JNU00</a>	<a href="#">FA28NP01H681JNU06</a>
NPO	820pF	±5%	50	<a href="#">FA28NP01H821JNU00</a>	<a href="#">FA28NP01H821JNU06</a>
NPO	1nF	±5%	50	<a href="#">FA28NP01H102JNU00</a>	<a href="#">FA28NP01H102JNU06</a>
NPO	1.2nF	±5%	50	<a href="#">FA28NP01H122JNU00</a>	<a href="#">FA28NP01H122JNU06</a>
NPO	1.5nF	±5%	50	<a href="#">FA28NP01H152JNU00</a>	<a href="#">FA28NP01H152JNU06</a>
NPO	1.8nF	±5%	50	<a href="#">FA28NP01H182JNU00</a>	<a href="#">FA28NP01H182JNU06</a>
NPO	2.2nF	±5%	50	<a href="#">FA28NP01H222JNU00</a>	<a href="#">FA28NP01H222JNU06</a>
NPO	2.7nF	±5%	50	<a href="#">FA28NP01H272JNU00</a>	<a href="#">FA28NP01H272JNU06</a>
NPO	3.3nF	±5%	50	<a href="#">FA28NP01H332JNU00</a>	<a href="#">FA28NP01H332JNU06</a>
NPO	3.9nF	±5%	50	<a href="#">FA28NP01H392JNU00</a>	<a href="#">FA28NP01H392JNU06</a>
NPO	4.7nF	±5%	50	<a href="#">FA28NP01H472JNU00</a>	<a href="#">FA28NP01H472JNU06</a>
NPO	5.6nF	±5%	50	<a href="#">FA28NP01H562JNU00</a>	<a href="#">FA28NP01H562JNU06</a>
NPO	6.8nF	±5%	50	<a href="#">FA28NP01H682JNU00</a>	<a href="#">FA28NP01H682JNU06</a>
NPO	8.2nF	±5%	50	<a href="#">FA28NP01H822JNU00</a>	<a href="#">FA28NP01H822JNU06</a>
NPO	10nF	±5%	50	<a href="#">FA28NP01H103JNU00</a>	<a href="#">FA28NP01H103JNU06</a>
NPO	10pF	±0.5pF	100	<a href="#">FA28NP02A100DNU00</a>	<a href="#">FA28NP02A100DNU06</a>
NPO	15pF	±5%	100	<a href="#">FA28NP02A150JNU00</a>	<a href="#">FA28NP02A150JNU06</a>
NPO	22pF	±5%	100	<a href="#">FA28NP02A220JNU00</a>	<a href="#">FA28NP02A220JNU06</a>
NPO	33pF	±5%	100	<a href="#">FA28NP02A330JNU00</a>	<a href="#">FA28NP02A330JNU06</a>
NPO	47pF	±5%	100	<a href="#">FA28NP02A470JNU00</a>	<a href="#">FA28NP02A470JNU06</a>
NPO	68pF	±5%	100	<a href="#">FA28NP02A680JNU00</a>	<a href="#">FA28NP02A680JNU06</a>
NPO	100pF	±5%	100	<a href="#">FA28NP02A101JNU00</a>	<a href="#">FA28NP02A101JNU06</a>
NPO	120pF	±5%	100	<a href="#">FA28NP02A121JNU00</a>	<a href="#">FA28NP02A121JNU06</a>
NPO	150pF	±5%	100	<a href="#">FA28NP02A151JNU00</a>	<a href="#">FA28NP02A151JNU06</a>
NPO	180pF	±5%	100	<a href="#">FA28NP02A181JNU00</a>	<a href="#">FA28NP02A181JNU06</a>
NPO	220pF	±5%	100	<a href="#">FA28NP02A221JNU00</a>	<a href="#">FA28NP02A221JNU06</a>
NPO	270pF	±5%	100	<a href="#">FA28NP02A271JNU00</a>	<a href="#">FA28NP02A271JNU06</a>
NPO	330pF	±5%	100	<a href="#">FA28NP02A331JNU00</a>	<a href="#">FA28NP02A331JNU06</a>
NPO	390pF	±5%	100	<a href="#">FA28NP02A391JNU00</a>	<a href="#">FA28NP02A391JNU06</a>
NPO	470pF	±5%	100	<a href="#">FA28NP02A471JNU00</a>	<a href="#">FA28NP02A471JNU06</a>
NPO	560pF	±5%	100	<a href="#">FA28NP02A561JNU00</a>	<a href="#">FA28NP02A561JNU06</a>
NPO	680pF	±5%	100	<a href="#">FA28NP02A681JNU00</a>	<a href="#">FA28NP02A681JNU06</a>
NPO	820pF	±5%	100	<a href="#">FA28NP02A821JNU00</a>	<a href="#">FA28NP02A821JNU06</a>

■ Gray items: These products are not recommended for new designs.

Click the part numbers for details.

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

# FA28 type

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

#### CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
NPO	1nF	±5%	100	<a href="#">FA28NP02A102JNU00</a>	<a href="#">FA28NP02A102JNU06</a>
NPO	1.2nF	±5%	100	<a href="#">FA28NP02A122JNU00</a>	<a href="#">FA28NP02A122JNU06</a>
NPO	1.5nF	±5%	100	<a href="#">FA28NP02A152JNU00</a>	<a href="#">FA28NP02A152JNU06</a>
NPO	1.8nF	±5%	100	<a href="#">FA28NP02A182JNU00</a>	<a href="#">FA28NP02A182JNU06</a>
NPO	2.2nF	±5%	100	<a href="#">FA28NP02A222JNU00</a>	<a href="#">FA28NP02A222JNU06</a>
NPO	2.7nF	±5%	100	<a href="#">FA28NP02A272JNU00</a>	<a href="#">FA28NP02A272JNU06</a>
NPO	3.3nF	±5%	100	<a href="#">FA28NP02A332JNU00</a>	<a href="#">FA28NP02A332JNU06</a>
NPO	820pF	±5%	250	<a href="#">FA28NP02E821JNU00</a>	<a href="#">FA28NP02E821JNU06</a>
NPO	1nF	±5%	250	<a href="#">FA28NP02E102JNU00</a>	<a href="#">FA28NP02E102JNU06</a>
NPO	1.2nF	±5%	250	<a href="#">FA28NP02E122JNU00</a>	<a href="#">FA28NP02E122JNU06</a>
NPO	1.5nF	±5%	250	<a href="#">FA28NP02E152JNU00</a>	<a href="#">FA28NP02E152JNU06</a>
NPO	1.8nF	±5%	250	<a href="#">FA28NP02E182JNU00</a>	<a href="#">FA28NP02E182JNU06</a>
NPO	2.2nF	±5%	250	<a href="#">FA28NP02E222JNU00</a>	<a href="#">FA28NP02E222JNU06</a>

■ Gray items: These products are not recommended for new designs.

Click the part numbers for details.

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

# FA28 type

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
X8R	68nF	±10%	25	<a href="#">FA28X8R1E683KNU00</a>	<a href="#">FA28X8R1E683KNU06</a>
X8R	100nF	±10%	25	<a href="#">FA28X8R1E104KNU00</a>	<a href="#">FA28X8R1E104KNU06</a>
X8R	150nF	±10%	25	<a href="#">FA28X8R1E154KRU00</a>	<a href="#">FA28X8R1E154KRU06</a>
X8R	220nF	±10%	25	<a href="#">FA28X8R1E224KRU00</a>	<a href="#">FA28X8R1E224KRU06</a>
X8R	1nF	±10%	50	<a href="#">FA28X8R1H102KNU00</a>	<a href="#">FA28X8R1H102KNU06</a>
X8R	1.5nF	±10%	50	<a href="#">FA28X8R1H152KNU00</a>	<a href="#">FA28X8R1H152KNU06</a>
X8R	2.2nF	±10%	50	<a href="#">FA28X8R1H222KNU00</a>	<a href="#">FA28X8R1H222KNU06</a>
X8R	3.3nF	±10%	50	<a href="#">FA28X8R1H332KNU00</a>	<a href="#">FA28X8R1H332KNU06</a>
X8R	4.7nF	±10%	50	<a href="#">FA28X8R1H472KNU00</a>	<a href="#">FA28X8R1H472KNU06</a>
X8R	6.8nF	±10%	50	<a href="#">FA28X8R1H682KNU00</a>	<a href="#">FA28X8R1H682KNU06</a>
X8R	10nF	±10%	50	<a href="#">FA28X8R1H103KNU00</a>	<a href="#">FA28X8R1H103KNU06</a>
X8R	15nF	±10%	50	<a href="#">FA28X8R1H153KNU00</a>	<a href="#">FA28X8R1H153KNU06</a>
X8R	22nF	±10%	50	<a href="#">FA28X8R1H223KNU00</a>	<a href="#">FA28X8R1H223KNU06</a>
X8R	33nF	±10%	50	<a href="#">FA28X8R1H333KNU00</a>	<a href="#">FA28X8R1H333KNU06</a>
X8R	47nF	±10%	50	<a href="#">FA28X8R1H473KNU00</a>	<a href="#">FA28X8R1H473KNU06</a>
X8R	68nF	±10%	50	<a href="#">FA28X8R1H683KRU00</a>	<a href="#">FA28X8R1H683KRU06</a>
X8R	100nF	±10%	50	<a href="#">FA28X8R1H104KRU00</a>	<a href="#">FA28X8R1H104KRU06</a>
X8R	1nF	±10%	100	<a href="#">FA28X8R2A102KNU00</a>	<a href="#">FA28X8R2A102KNU06</a>
X8R	1.5nF	±10%	100	<a href="#">FA28X8R2A152KNU00</a>	<a href="#">FA28X8R2A152KNU06</a>
X8R	2.2nF	±10%	100	<a href="#">FA28X8R2A222KNU00</a>	<a href="#">FA28X8R2A222KNU06</a>
X8R	3.3nF	±10%	100	<a href="#">FA28X8R2A332KNU00</a>	<a href="#">FA28X8R2A332KNU06</a>
X8R	4.7nF	±10%	100	<a href="#">FA28X8R2A472KNU00</a>	<a href="#">FA28X8R2A472KNU06</a>
X8R	6.8nF	±10%	100	<a href="#">FA28X8R2A682KNU00</a>	<a href="#">FA28X8R2A682KNU06</a>
X8R	10nF	±10%	100	<a href="#">FA28X8R2A103KNU00</a>	<a href="#">FA28X8R2A103KNU06</a>
X8R	15nF	±10%	100	<a href="#">FA28X8R2A153KNU00</a>	<a href="#">FA28X8R2A153KNU06</a>
X8R	22nF	±10%	100	<a href="#">FA28X8R2A223KRU00</a>	<a href="#">FA28X8R2A223KRU06</a>
X8R	33nF	±10%	100	<a href="#">FA28X8R2A333KRU00</a>	<a href="#">FA28X8R2A333KRU06</a>

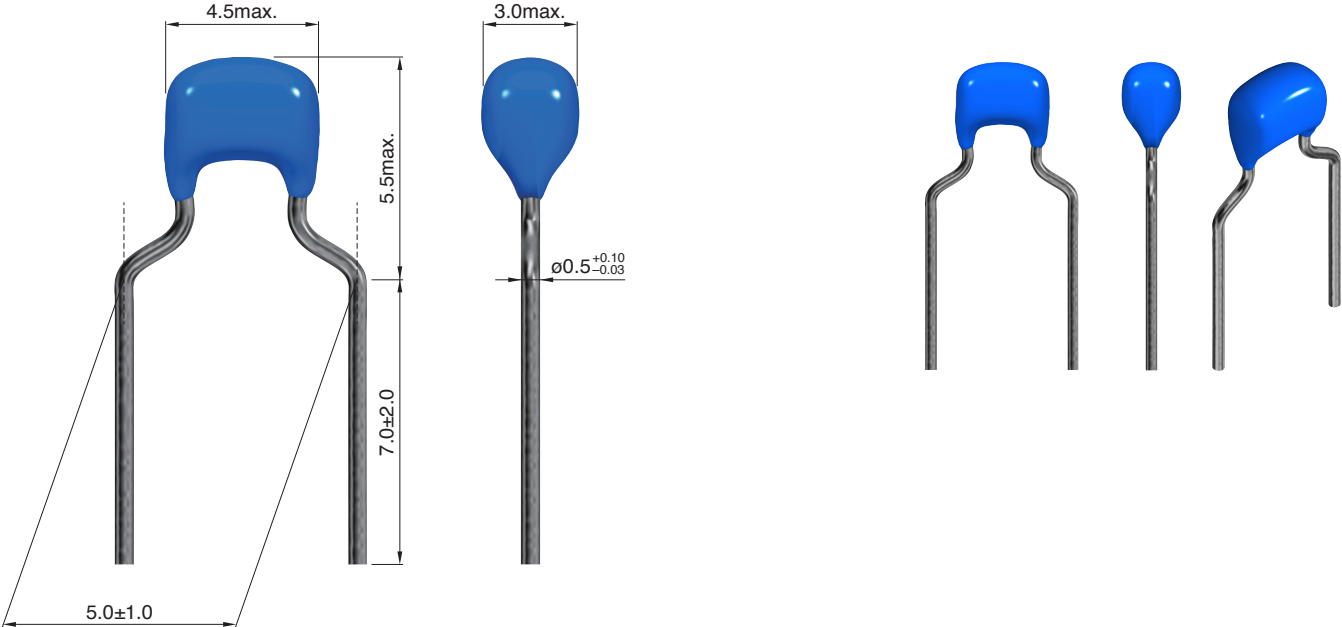
■ Gray items: These products are not recommended for new designs.

Click the part numbers for details.


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

# FA24 type

## ■ SHAPE & DIMENSIONS



Dimensions in mm

 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.



# FA24 type

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

#### CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
NPO	15nF	±5%	50	<a href="#">FA24NP01H153JNU00</a>	<a href="#">FA24NP01H153JNU06</a>
NPO	22nF	±5%	50	<a href="#">FA24NP01H223JNU00</a>	<a href="#">FA24NP01H223JNU06</a>
NPO	33nF	±5%	50	<a href="#">FA24NP01H333JNU00</a>	<a href="#">FA24NP01H333JNU06</a>
NPO	3.9nF	±5%	100	<a href="#">FA24NP02A392JNU00</a>	<a href="#">FA24NP02A392JNU06</a>
NPO	4.7nF	±5%	100	<a href="#">FA24NP02A472JNU00</a>	<a href="#">FA24NP02A472JNU06</a>
NPO	5.6nF	±5%	100	<a href="#">FA24NP02A562JNU00</a>	<a href="#">FA24NP02A562JNU06</a>
NPO	6.8nF	±5%	100	<a href="#">FA24NP02A682JNU00</a>	<a href="#">FA24NP02A682JNU06</a>
NPO	8.2nF	±5%	100	<a href="#">FA24NP02A822JNU00</a>	<a href="#">FA24NP02A822JNU06</a>
NPO	10nF	±5%	100	<a href="#">FA24NP02A103JNU00</a>	<a href="#">FA24NP02A103JNU06</a>
NPO	3.3nF	±5%	250	<a href="#">FA24NP02E332JNU00</a>	<a href="#">FA24NP02E332JNU06</a>
NPO	3.9nF	±5%	250	<a href="#">FA24NP02E392JNU00</a>	<a href="#">FA24NP02E392JNU06</a>
NPO	4.7nF	±5%	250	<a href="#">FA24NP02E472JNU00</a>	<a href="#">FA24NP02E472JNU06</a>
NPO	5.6nF	±5%	250	<a href="#">FA24NP02E562JNU00</a>	<a href="#">FA24NP02E562JNU06</a>
NPO	6.8nF	±5%	250	<a href="#">FA24NP02E682JNU00</a>	<a href="#">FA24NP02E682JNU06</a>
NPO	8.2nF	±5%	250	<a href="#">FA24NP02E822JNU00</a>	<a href="#">FA24NP02E822JNU06</a>
NPO	10nF	±5%	250	<a href="#">FA24NP02E103JNU00</a>	<a href="#">FA24NP02E103JNU06</a>
NPO	100pF	±5%	450	<a href="#">FA24NP02W101JNU00</a>	<a href="#">FA24NP02W101JNU06</a>
NPO	120pF	±5%	450	<a href="#">FA24NP02W121JNU00</a>	<a href="#">FA24NP02W121JNU06</a>
NPO	150pF	±5%	450	<a href="#">FA24NP02W151JNU00</a>	<a href="#">FA24NP02W151JNU06</a>
NPO	180pF	±5%	450	<a href="#">FA24NP02W181JNU00</a>	<a href="#">FA24NP02W181JNU06</a>
NPO	220pF	±5%	450	<a href="#">FA24NP02W221JNU00</a>	<a href="#">FA24NP02W221JNU06</a>
NPO	270pF	±5%	450	<a href="#">FA24NP02W271JNU00</a>	<a href="#">FA24NP02W271JNU06</a>
NPO	330pF	±5%	450	<a href="#">FA24NP02W331JNU00</a>	<a href="#">FA24NP02W331JNU06</a>
NPO	390pF	±5%	450	<a href="#">FA24NP02W391JNU00</a>	<a href="#">FA24NP02W391JNU06</a>
NPO	470pF	±5%	450	<a href="#">FA24NP02W471JNU00</a>	<a href="#">FA24NP02W471JNU06</a>
NPO	560pF	±5%	450	<a href="#">FA24NP02W561JNU00</a>	<a href="#">FA24NP02W561JNU06</a>
NPO	680pF	±5%	450	<a href="#">FA24NP02W681JNU00</a>	<a href="#">FA24NP02W681JNU06</a>
NPO	820pF	±5%	450	<a href="#">FA24NP02W821JNU00</a>	<a href="#">FA24NP02W821JNU06</a>
NPO	1nF	±5%	450	<a href="#">FA24NP02W102JNU00</a>	<a href="#">FA24NP02W102JNU06</a>
NPO	1.2nF	±5%	450	<a href="#">FA24NP02W122JNU00</a>	<a href="#">FA24NP02W122JNU06</a>
NPO	1.5nF	±5%	450	<a href="#">FA24NP02W152JNU00</a>	<a href="#">FA24NP02W152JNU06</a>
NPO	1.8nF	±5%	450	<a href="#">FA24NP02W182JNU00</a>	<a href="#">FA24NP02W182JNU06</a>
NPO	2.2nF	±5%	450	<a href="#">FA24NP02W222JNU00</a>	<a href="#">FA24NP02W222JNU06</a>
NPO	2.7nF	±5%	450	<a href="#">FA24NP02W272JNU00</a>	<a href="#">FA24NP02W272JNU06</a>
NPO	3.3nF	±5%	450	<a href="#">FA24NP02W332JNU00</a>	<a href="#">FA24NP02W332JNU06</a>
NPO	3.9nF	±5%	450	<a href="#">FA24NP02W392JNU00</a>	<a href="#">FA24NP02W392JNU06</a>
NPO	4.7nF	±5%	450	<a href="#">FA24NP02W472JNU00</a>	<a href="#">FA24NP02W472JNU06</a>
NPO	5.6nF	±5%	450	<a href="#">FA24NP02W562JNU00</a>	<a href="#">FA24NP02W562JNU06</a>

#### CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
X8R	150nF	±10%	25	<a href="#">FA24X8R1E154KNU00</a>	<a href="#">FA24X8R1E154KNU06</a>
X8R	220nF	±10%	25	<a href="#">FA24X8R1E224KNU00</a>	<a href="#">FA24X8R1E224KNU06</a>
X8R	330nF	±10%	25	<a href="#">FA24X8R1E334KNU00</a>	<a href="#">FA24X8R1E334KNU06</a>
X8R	470nF	±10%	25	<a href="#">FA24X8R1E474KRU00</a>	<a href="#">FA24X8R1E474KRU06</a>
X8R	68nF	±10%	50	<a href="#">FA24X8R1H683KNU00</a>	<a href="#">FA24X8R1H683KNU06</a>
X8R	100nF	±10%	50	<a href="#">FA24X8R1H104KNU00</a>	<a href="#">FA24X8R1H104KNU06</a>
X8R	150nF	±10%	50	<a href="#">FA24X8R1H154KRU00</a>	<a href="#">FA24X8R1H154KRU06</a>
X8R	220nF	±10%	50	<a href="#">FA24X8R1H224KRU00</a>	<a href="#">FA24X8R1H224KRU06</a>
X8R	22nF	±10%	100	<a href="#">FA24X8R2A223KNU00</a>	<a href="#">FA24X8R2A223KNU06</a>
X8R	47nF	±10%	100	<a href="#">FA24X8R2A473KRU00</a>	<a href="#">FA24X8R2A473KRU06</a>
X8R	68nF	±10%	100	<a href="#">FA24X8R2A683KRU00</a>	<a href="#">FA24X8R2A683KRU06</a>

■ Gray items: These products are not recommended for new designs.

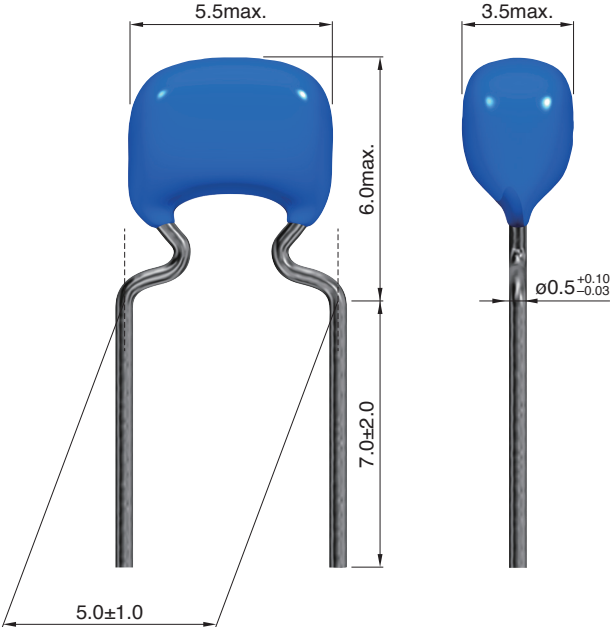
Click the part numbers for details.

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

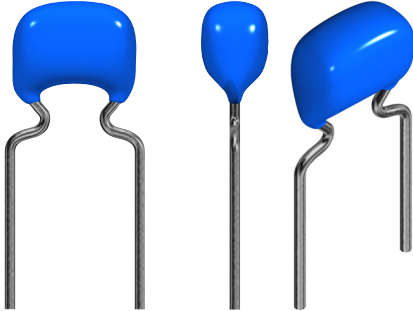
⚠ Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.


# FA26 type

## ■ SHAPE & DIMENSIONS



Dimensions in mm



 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.

# FA26 type

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

#### CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
NPO	47nF	±5%	50	<a href="#">FA26NP01H473JNU00</a>	<a href="#">FA26NP01H473JNU06</a>
NPO	68nF	±5%	50	<a href="#">FA26NP01H683JNU00</a>	<a href="#">FA26NP01H683JNU06</a>
NPO	100nF	±5%	50	<a href="#">FA26NP01H104JNU00</a>	<a href="#">FA26NP01H104JNU06</a>
NPO	15nF	±5%	100	<a href="#">FA26NP02A153JNU00</a>	<a href="#">FA26NP02A153JNU06</a>
NPO	22nF	±5%	100	<a href="#">FA26NP02A223JNU00</a>	<a href="#">FA26NP02A223JNU06</a>
NPO	33nF	±5%	100	<a href="#">FA26NP02A333JNU00</a>	<a href="#">FA26NP02A333JNU06</a>
NPO	15nF	±5%	250	<a href="#">FA26NP02E153JNU00</a>	<a href="#">FA26NP02E153JNU06</a>
NPO	22nF	±5%	250	<a href="#">FA26NP02E223JNU00</a>	<a href="#">FA26NP02E223JNU06</a>
NPO	6.8nF	±5%	450	<a href="#">FA26NP02W682JNU00</a>	<a href="#">FA26NP02W682JNU06</a>
NPO	8.2nF	±5%	450	<a href="#">FA26NP02W822JNU00</a>	<a href="#">FA26NP02W822JNU06</a>
NPO	10nF	±5%	450	<a href="#">FA26NP02W103JNU00</a>	<a href="#">FA26NP02W103JNU06</a>
NPO	15nF	±5%	450	<a href="#">FA26NP02W153JNU00</a>	<a href="#">FA26NP02W153JNU06</a>
NPO	3.9nF	±5%	630	<a href="#">FA26NP02J392JNU00</a>	<a href="#">FA26NP02J392JNU06</a>
NPO	4.7nF	±5%	630	<a href="#">FA26NP02J472JNU00</a>	<a href="#">FA26NP02J472JNU06</a>
NPO	5.6nF	±5%	630	<a href="#">FA26NP02J562JNU00</a>	<a href="#">FA26NP02J562JNU06</a>
NPO	6.8nF	±5%	630	<a href="#">FA26NP02J682JNU00</a>	<a href="#">FA26NP02J682JNU06</a>
NPO	8.2nF	±5%	630	<a href="#">FA26NP02J822JNU00</a>	<a href="#">FA26NP02J822JNU06</a>
NPO	10nF	±5%	630	<a href="#">FA26NP02J103JNU00</a>	<a href="#">FA26NP02J103JNU06</a>

#### CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
X8R	470nF	±10%	25	<a href="#">FA26X8R1E474KNU00</a>	<a href="#">FA26X8R1E474KNU06</a>
X8R	680nF	±10%	25	<a href="#">FA26X8R1E684KNU00</a>	<a href="#">FA26X8R1E684KNU06</a>
X8R	1uF	±10%	25	<a href="#">FA26X8R1E105KNU00</a>	<a href="#">FA26X8R1E105KNU06</a>
X8R	1.5uF	±10%	25	<a href="#">FA26X8R1E155KRU00</a>	<a href="#">FA26X8R1E155KRU06</a>
X8R	2.2uF	±10%	25	<a href="#">FA26X8R1E225KRU00</a>	<a href="#">FA26X8R1E225KRU06</a>
X8R	150nF	±10%	50	<a href="#">FA26X8R1H154KNU00</a>	<a href="#">FA26X8R1H154KNU06</a>
X8R	220nF	±10%	50	<a href="#">FA26X8R1H224KNU00</a>	<a href="#">FA26X8R1H224KNU06</a>
X8R	330nF	±10%	50	<a href="#">FA26X8R1H334KNU00</a>	<a href="#">FA26X8R1H334KNU06</a>
X8R	470nF	±10%	50	<a href="#">FA26X8R1H474KNU00</a>	<a href="#">FA26X8R1H474KNU06</a>
X8R	680nF	±10%	50	<a href="#">FA26X8R1H684KRU00</a>	<a href="#">FA26X8R1H684KRU06</a>
X8R	1uF	±10%	50	<a href="#">FA26X8R1H105KRU00</a>	<a href="#">FA26X8R1H105KRU06</a>
X8R	33nF	±10%	100	<a href="#">FA26X8R2A333KNU00</a>	<a href="#">FA26X8R2A333KNU06</a>
X8R	47nF	±10%	100	<a href="#">FA26X8R2A473KNU00</a>	<a href="#">FA26X8R2A473KNU06</a>
X8R	68nF	±10%	100	<a href="#">FA26X8R2A683KNU00</a>	<a href="#">FA26X8R2A683KNU06</a>
X8R	100nF	±10%	100	<a href="#">FA26X8R2A104KNU00</a>	<a href="#">FA26X8R2A104KNU06</a>
X8R	150nF	±10%	100	<a href="#">FA26X8R2A154KNU00</a>	<a href="#">FA26X8R2A154KNU06</a>
X8R	220nF	±10%	100	<a href="#">FA26X8R2A224KRU00</a>	<a href="#">FA26X8R2A224KRU06</a>
X8R	330nF	±10%	100	<a href="#">FA26X8R2A334KRU00</a>	<a href="#">FA26X8R2A334KRU06</a>

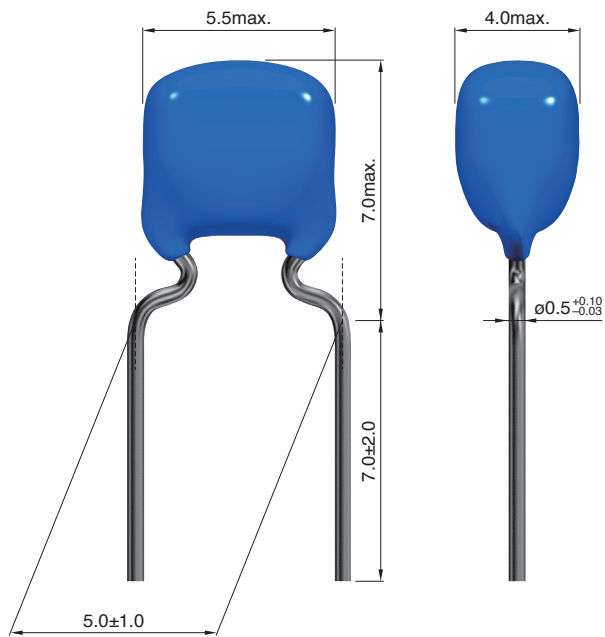
■ Gray items: These products are not recommended for new designs.

Click the part numbers for details.

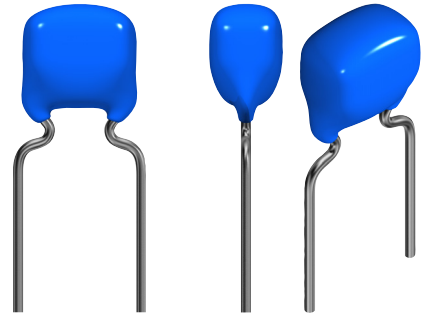
\* The part numbers are TDK's standard specification products.

# 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.*	
				Separate	Taping
NP0	68nF	±5%	100	<a href="#">FA20NP02A683JNU00</a>	<a href="#">FA20NP02A683JNU06</a>
NP0	33nF	±5%	250	<a href="#">FA20NP02E333JNU00</a>	<a href="#">FA20NP02E333JNU06</a>
NP0	47nF	±5%	250	<a href="#">FA20NP02E473JNU00</a>	<a href="#">FA20NP02E473JNU06</a>
NP0	22nF	±5%	450	<a href="#">FA20NP02W223JNU00</a>	<a href="#">FA20NP02W223JNU06</a>
NP0	33nF	±5%	450	<a href="#">FA20NP02W333JNU00</a>	<a href="#">FA20NP02W333JNU06</a>
NP0	15nF	±5%	630	<a href="#">FA20NP02J153JNU00</a>	<a href="#">FA20NP02J153JNU06</a>
NP0	22nF	±5%	630	<a href="#">FA20NP02J223JNU00</a>	<a href="#">FA20NP02J223JNU06</a>
NP0	33nF	±5%	630	<a href="#">FA20NP02J333JNU00</a>	<a href="#">FA20NP02J333JNU06</a>

#### CLASS 2 (TEMPERATURE STABLE)

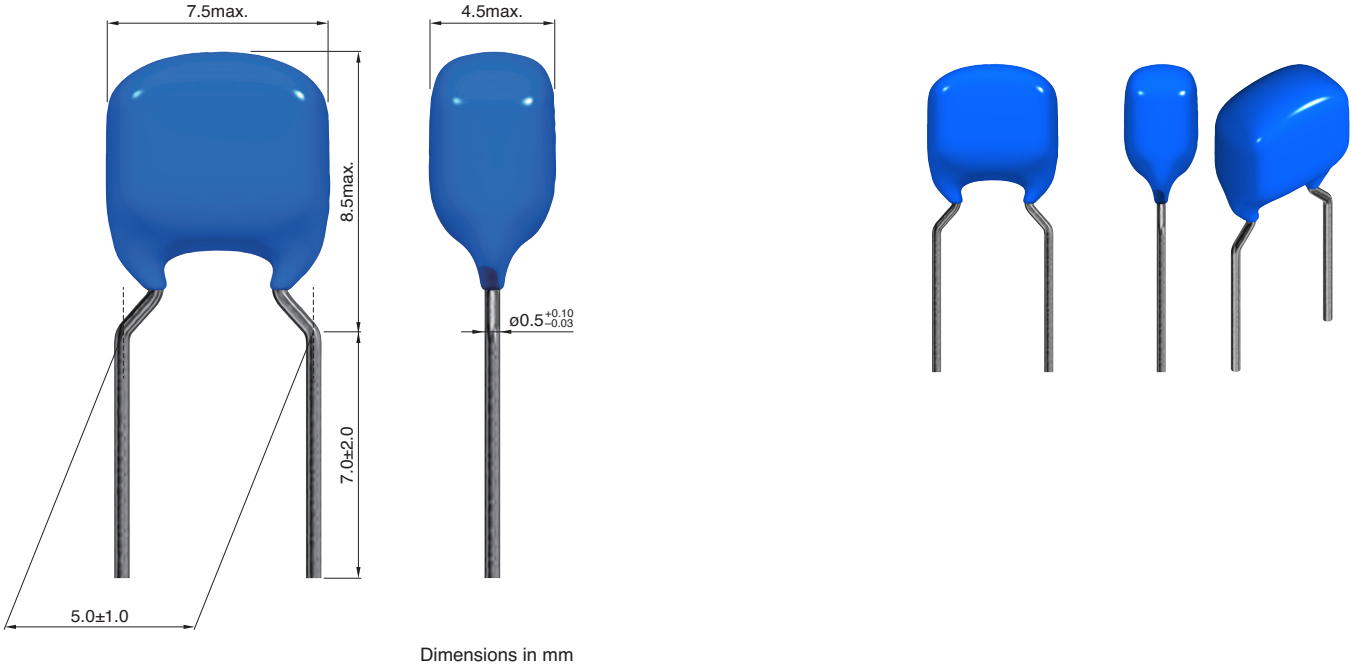
Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
X8R	1.5uF	±10%	25	<a href="#">FA20X8R1E155KNU00</a>	<a href="#">FA20X8R1E155KNU06</a>
X8R	2.2uF	±10%	25	<a href="#">FA20X8R1E225KNU00</a>	<a href="#">FA20X8R1E225KNU06</a>
X8R	3.3uF	±10%	25	<a href="#">FA20X8R1E335KNU00</a>	<a href="#">FA20X8R1E335KNU06</a>
X8R	4.7uF	±10%	25	<a href="#">FA20X8R1E475KRU00</a>	<a href="#">FA20X8R1E475KRU06</a>
X8R	470nF	±10%	100	<a href="#">FA20X8R2A474KRU00</a>	<a href="#">FA20X8R2A474KRU06</a>
X8R	680nF	±10%	100	<a href="#">FA20X8R2A684KRU00</a>	<a href="#">FA20X8R2A684KRU06</a>


Click the part numbers for details.

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

# FA22 type

## ■ SHAPE & DIMENSIONS



 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.

# FA22 type

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

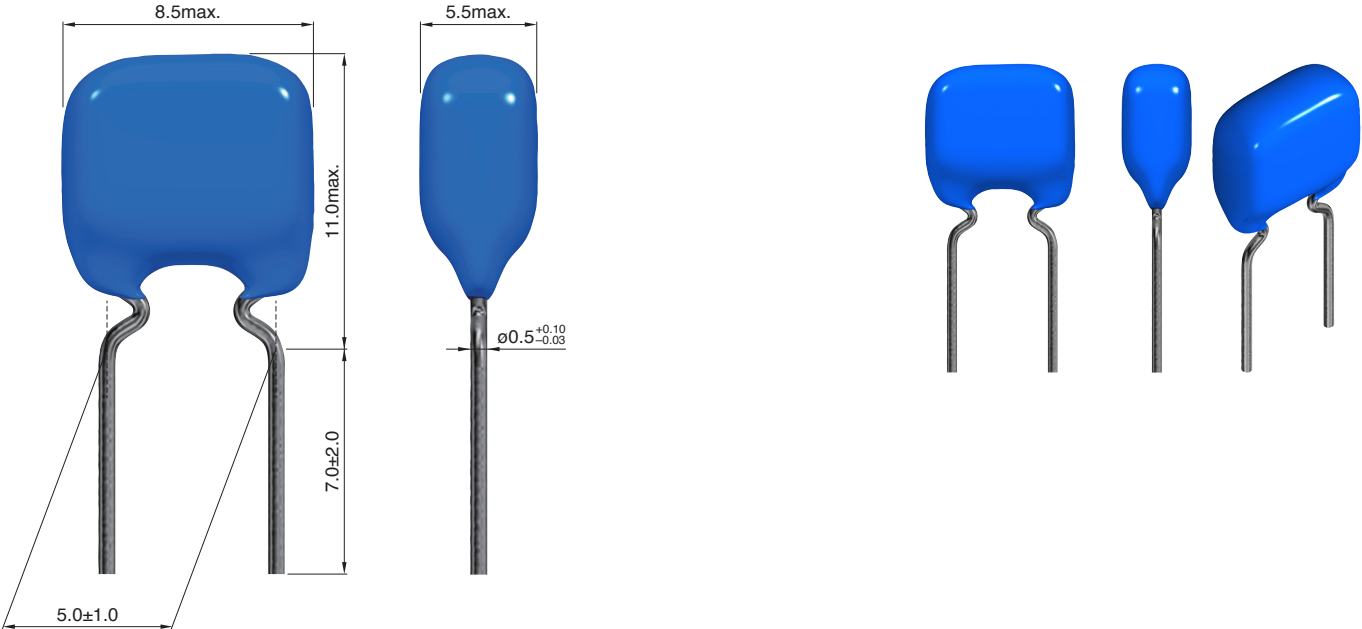
Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
NPO	68nF	±5%	250	<a href="#">FA22NP02E683JRU00</a>	<a href="#">FA22NP02E683JRU06</a>
NPO	100nF	±5%	250	<a href="#">FA22NP02E104JRU00</a>	<a href="#">FA22NP02E104JRU06</a>
NPO	47nF	±5%	450	<a href="#">FA22NP02W473JNU00</a>	<a href="#">FA22NP02W473JNU06</a>
NPO	68nF	±5%	450	<a href="#">FA22NP02W683JNU00</a>	<a href="#">FA22NP02W683JNU06</a>
NPO	47nF	±5%	630	<a href="#">FA22NP02J473JNU00</a>	<a href="#">FA22NP02J473JNU06</a>

Click the part numbers for details.


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

# FA23 type

## ■ SHAPE & DIMENSIONS



Dimensions in mm

 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.



# FA23 type

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

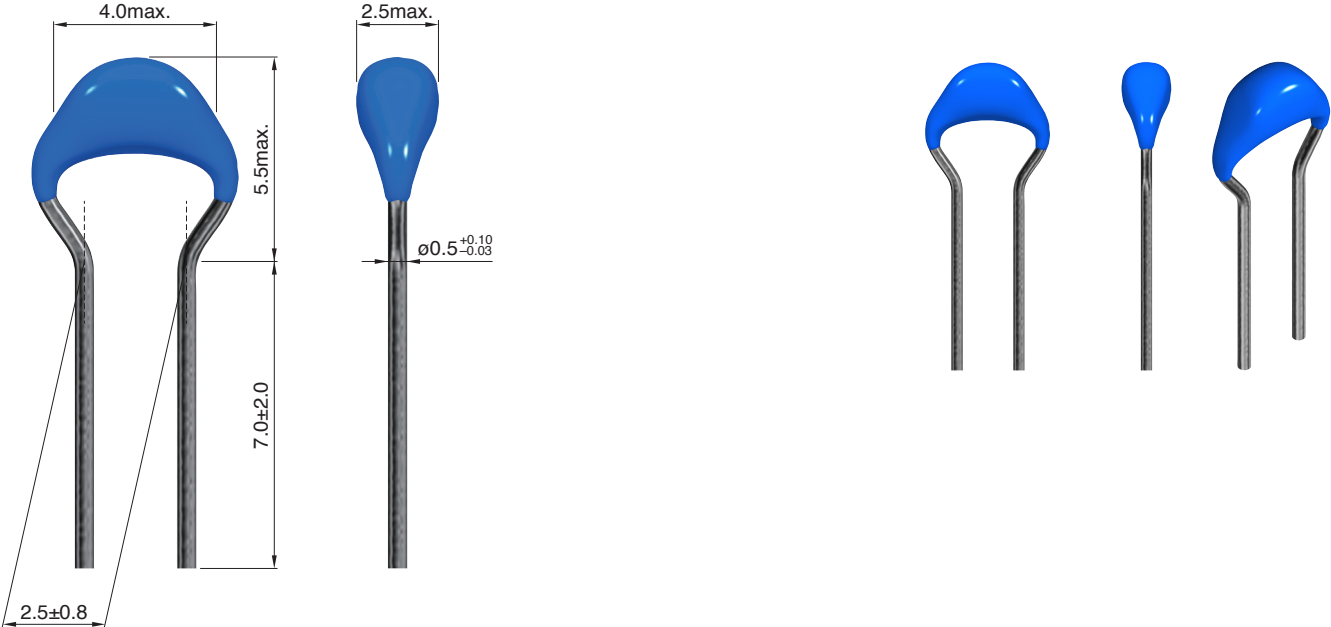
Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
NPO	150nF	±5%	100	<a href="#">FA23NP02A154JNU00</a>	<a href="#">FA23NP02A154JNU06</a>
NPO	150nF	±5%	250	<a href="#">FA23NP02E154JRU00</a>	<a href="#">FA23NP02E154JRU06</a>
NPO	100nF	±5%	450	<a href="#">FA23NP02W104JNU00</a>	<a href="#">FA23NP02W104JNU06</a>

Click the part numbers for details.


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

# FA18 type

## ■ SHAPE & DIMENSIONS



Dimensions in mm

 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.

# FA18 type

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
NPO	10pF	±0.5pF	50	<a href="#">FA18NP01H100DNU00</a>	<a href="#">FA18NP01H100DNU06</a>
NPO	15pF	±5%	50	<a href="#">FA18NP01H150JNU00</a>	<a href="#">FA18NP01H150JNU06</a>
NPO	22pF	±5%	50	<a href="#">FA18NP01H220JNU00</a>	<a href="#">FA18NP01H220JNU06</a>
NPO	33pF	±5%	50	<a href="#">FA18NP01H330JNU00</a>	<a href="#">FA18NP01H330JNU06</a>
NPO	47pF	±5%	50	<a href="#">FA18NP01H470JNU00</a>	<a href="#">FA18NP01H470JNU06</a>
NPO	68pF	±5%	50	<a href="#">FA18NP01H680JNU00</a>	<a href="#">FA18NP01H680JNU06</a>
NPO	100pF	±5%	50	<a href="#">FA18NP01H101JNU00</a>	<a href="#">FA18NP01H101JNU06</a>
NPO	120pF	±5%	50	<a href="#">FA18NP01H121JNU00</a>	<a href="#">FA18NP01H121JNU06</a>
NPO	150pF	±5%	50	<a href="#">FA18NP01H151JNU00</a>	<a href="#">FA18NP01H151JNU06</a>
NPO	180pF	±5%	50	<a href="#">FA18NP01H181JNU00</a>	<a href="#">FA18NP01H181JNU06</a>
NPO	220pF	±5%	50	<a href="#">FA18NP01H221JNU00</a>	<a href="#">FA18NP01H221JNU06</a>
NPO	270pF	±5%	50	<a href="#">FA18NP01H271JNU00</a>	<a href="#">FA18NP01H271JNU06</a>
NPO	330pF	±5%	50	<a href="#">FA18NP01H331JNU00</a>	<a href="#">FA18NP01H331JNU06</a>
NPO	390pF	±5%	50	<a href="#">FA18NP01H391JNU00</a>	<a href="#">FA18NP01H391JNU06</a>
NPO	470pF	±5%	50	<a href="#">FA18NP01H471JNU00</a>	<a href="#">FA18NP01H471JNU06</a>
NPO	560pF	±5%	50	<a href="#">FA18NP01H561JNU00</a>	<a href="#">FA18NP01H561JNU06</a>
NPO	680pF	±5%	50	<a href="#">FA18NP01H681JNU00</a>	<a href="#">FA18NP01H681JNU06</a>
NPO	820pF	±5%	50	<a href="#">FA18NP01H821JNU00</a>	<a href="#">FA18NP01H821JNU06</a>
NPO	1nF	±5%	50	<a href="#">FA18NP01H102JNU00</a>	<a href="#">FA18NP01H102JNU06</a>
NPO	1.2nF	±5%	50	<a href="#">FA18NP01H122JNU00</a>	<a href="#">FA18NP01H122JNU06</a>
NPO	1.5nF	±5%	50	<a href="#">FA18NP01H152JNU00</a>	<a href="#">FA18NP01H152JNU06</a>
NPO	1.8nF	±5%	50	<a href="#">FA18NP01H182JNU00</a>	<a href="#">FA18NP01H182JNU06</a>
NPO	2.2nF	±5%	50	<a href="#">FA18NP01H222JNU00</a>	<a href="#">FA18NP01H222JNU06</a>
NPO	2.7nF	±5%	50	<a href="#">FA18NP01H272JNU00</a>	<a href="#">FA18NP01H272JNU06</a>
NPO	3.3nF	±5%	50	<a href="#">FA18NP01H332JNU00</a>	<a href="#">FA18NP01H332JNU06</a>
NPO	3.9nF	±5%	50	<a href="#">FA18NP01H392JNU00</a>	<a href="#">FA18NP01H392JNU06</a>
NPO	4.7nF	±5%	50	<a href="#">FA18NP01H472JNU00</a>	<a href="#">FA18NP01H472JNU06</a>
NPO	5.6nF	±5%	50	<a href="#">FA18NP01H562JNU00</a>	<a href="#">FA18NP01H562JNU06</a>
NPO	6.8nF	±5%	50	<a href="#">FA18NP01H682JNU00</a>	<a href="#">FA18NP01H682JNU06</a>
NPO	8.2nF	±5%	50	<a href="#">FA18NP01H822JNU00</a>	<a href="#">FA18NP01H822JNU06</a>
NPO	10nF	±5%	50	<a href="#">FA18NP01H103JNU00</a>	<a href="#">FA18NP01H103JNU06</a>
NPO	10pF	±0.5pF	100	<a href="#">FA18NP02A100DNU00</a>	<a href="#">FA18NP02A100DNU06</a>
NPO	15pF	±5%	100	<a href="#">FA18NP02A150JNU00</a>	<a href="#">FA18NP02A150JNU06</a>
NPO	22pF	±5%	100	<a href="#">FA18NP02A220JNU00</a>	<a href="#">FA18NP02A220JNU06</a>
NPO	33pF	±5%	100	<a href="#">FA18NP02A330JNU00</a>	<a href="#">FA18NP02A330JNU06</a>
NPO	47pF	±5%	100	<a href="#">FA18NP02A470JNU00</a>	<a href="#">FA18NP02A470JNU06</a>
NPO	68pF	±5%	100	<a href="#">FA18NP02A680JNU00</a>	<a href="#">FA18NP02A680JNU06</a>
NPO	100pF	±5%	100	<a href="#">FA18NP02A101JNU00</a>	<a href="#">FA18NP02A101JNU06</a>
NPO	120pF	±5%	100	<a href="#">FA18NP02A121JNU00</a>	<a href="#">FA18NP02A121JNU06</a>
NPO	150pF	±5%	100	<a href="#">FA18NP02A151JNU00</a>	<a href="#">FA18NP02A151JNU06</a>
NPO	180pF	±5%	100	<a href="#">FA18NP02A181JNU00</a>	<a href="#">FA18NP02A181JNU06</a>
NPO	220pF	±5%	100	<a href="#">FA18NP02A221JNU00</a>	<a href="#">FA18NP02A221JNU06</a>
NPO	270pF	±5%	100	<a href="#">FA18NP02A271JNU00</a>	<a href="#">FA18NP02A271JNU06</a>
NPO	330pF	±5%	100	<a href="#">FA18NP02A331JNU00</a>	<a href="#">FA18NP02A331JNU06</a>
NPO	390pF	±5%	100	<a href="#">FA18NP02A391JNU00</a>	<a href="#">FA18NP02A391JNU06</a>
NPO	470pF	±5%	100	<a href="#">FA18NP02A471JNU00</a>	<a href="#">FA18NP02A471JNU06</a>
NPO	560pF	±5%	100	<a href="#">FA18NP02A561JNU00</a>	<a href="#">FA18NP02A561JNU06</a>
NPO	680pF	±5%	100	<a href="#">FA18NP02A681JNU00</a>	<a href="#">FA18NP02A681JNU06</a>
NPO	820pF	±5%	100	<a href="#">FA18NP02A821JNU00</a>	<a href="#">FA18NP02A821JNU06</a>
NPO	1nF	±5%	100	<a href="#">FA18NP02A102JNU00</a>	<a href="#">FA18NP02A102JNU06</a>
NPO	1.2nF	±5%	100	<a href="#">FA18NP02A122JNU00</a>	<a href="#">FA18NP02A122JNU06</a>
NPO	1.5nF	±5%	100	<a href="#">FA18NP02A152JNU00</a>	<a href="#">FA18NP02A152JNU06</a>
NPO	1.8nF	±5%	100	<a href="#">FA18NP02A182JNU00</a>	<a href="#">FA18NP02A182JNU06</a>
NPO	2.2nF	±5%	100	<a href="#">FA18NP02A222JNU00</a>	<a href="#">FA18NP02A222JNU06</a>
NPO	2.7nF	±5%	100	<a href="#">FA18NP02A272JNU00</a>	<a href="#">FA18NP02A272JNU06</a>
NPO	3.3nF	±5%	100	<a href="#">FA18NP02A332JNU00</a>	<a href="#">FA18NP02A332JNU06</a>

■ Gray items: These products are not recommended for new designs.

Click the part numbers for details.

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

# FA18 type

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
X8R	68nF	±10%	25	<a href="#">FA18X8R1E683KNU00</a>	<a href="#">FA18X8R1E683KNU06</a>
X8R	100nF	±10%	25	<a href="#">FA18X8R1E104KNU00</a>	<a href="#">FA18X8R1E104KNU06</a>
X8R	150nF	±10%	25	<a href="#">FA18X8R1E154KRU00</a>	<a href="#">FA18X8R1E154KRU06</a>
X8R	220nF	±10%	25	<a href="#">FA18X8R1E224KRU00</a>	<a href="#">FA18X8R1E224KRU06</a>
X8R	1nF	±10%	50	<a href="#">FA18X8R1H102KNU00</a>	<a href="#">FA18X8R1H102KNU06</a>
X8R	1.5nF	±10%	50	<a href="#">FA18X8R1H152KNU00</a>	<a href="#">FA18X8R1H152KNU06</a>
X8R	2.2nF	±10%	50	<a href="#">FA18X8R1H222KNU00</a>	<a href="#">FA18X8R1H222KNU06</a>
X8R	3.3nF	±10%	50	<a href="#">FA18X8R1H332KNU00</a>	<a href="#">FA18X8R1H332KNU06</a>
X8R	4.7nF	±10%	50	<a href="#">FA18X8R1H472KNU00</a>	<a href="#">FA18X8R1H472KNU06</a>
X8R	6.8nF	±10%	50	<a href="#">FA18X8R1H682KNU00</a>	<a href="#">FA18X8R1H682KNU06</a>
X8R	10nF	±10%	50	<a href="#">FA18X8R1H103KNU00</a>	<a href="#">FA18X8R1H103KNU06</a>
X8R	15nF	±10%	50	<a href="#">FA18X8R1H153KNU00</a>	<a href="#">FA18X8R1H153KNU06</a>
X8R	22nF	±10%	50	<a href="#">FA18X8R1H223KNU00</a>	<a href="#">FA18X8R1H223KNU06</a>
X8R	33nF	±10%	50	<a href="#">FA18X8R1H333KNU00</a>	<a href="#">FA18X8R1H333KNU06</a>
X8R	47nF	±10%	50	<a href="#">FA18X8R1H473KNU00</a>	<a href="#">FA18X8R1H473KNU06</a>
X8R	68nF	±10%	50	<a href="#">FA18X8R1H683KRU00</a>	<a href="#">FA18X8R1H683KRU06</a>
X8R	100nF	±10%	50	<a href="#">FA18X8R1H104KRU00</a>	<a href="#">FA18X8R1H104KRU06</a>
X8R	1nF	±10%	100	<a href="#">FA18X8R2A102KNU00</a>	<a href="#">FA18X8R2A102KNU06</a>
X8R	1.5nF	±10%	100	<a href="#">FA18X8R2A152KNU00</a>	<a href="#">FA18X8R2A152KNU06</a>
X8R	2.2nF	±10%	100	<a href="#">FA18X8R2A222KNU00</a>	<a href="#">FA18X8R2A222KNU06</a>
X8R	3.3nF	±10%	100	<a href="#">FA18X8R2A332KNU00</a>	<a href="#">FA18X8R2A332KNU06</a>
X8R	4.7nF	±10%	100	<a href="#">FA18X8R2A472KNU00</a>	<a href="#">FA18X8R2A472KNU06</a>
X8R	6.8nF	±10%	100	<a href="#">FA18X8R2A682KNU00</a>	<a href="#">FA18X8R2A682KNU06</a>
X8R	10nF	±10%	100	<a href="#">FA18X8R2A103KNU00</a>	<a href="#">FA18X8R2A103KNU06</a>
X8R	15nF	±10%	100	<a href="#">FA18X8R2A153KNU00</a>	<a href="#">FA18X8R2A153KNU06</a>
X8R	22nF	±10%	100	<a href="#">FA18X8R2A223KRU00</a>	<a href="#">FA18X8R2A223KRU06</a>
X8R	33nF	±10%	100	<a href="#">FA18X8R2A333KRU00</a>	<a href="#">FA18X8R2A333KRU06</a>

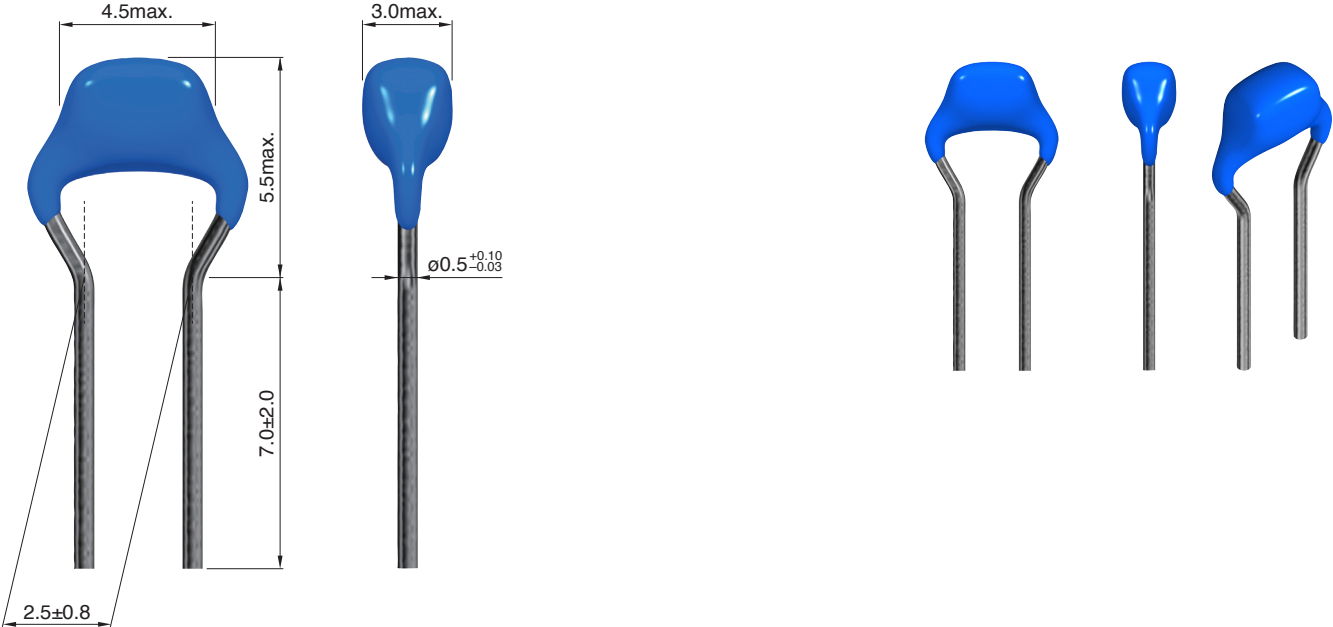
■ Gray items: These products are not recommended for new designs.

Click the part numbers for details.


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

# FA14 type

## ■ SHAPE & DIMENSIONS



Dimensions in mm

 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.

# FA14 type

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

#### CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
NP0	15nF	±5%	50	<a href="#">FA14NP01H153JNU00</a>	<a href="#">FA14NP01H153JNU06</a>
NP0	22nF	±5%	50	<a href="#">FA14NP01H223JNU00</a>	<a href="#">FA14NP01H223JNU06</a>
NP0	33nF	±5%	50	<a href="#">FA14NP01H333JNU00</a>	<a href="#">FA14NP01H333JNU06</a>
NP0	3.9nF	±5%	100	<a href="#">FA14NP02A392JNU00</a>	<a href="#">FA14NP02A392JNU06</a>
NP0	4.7nF	±5%	100	<a href="#">FA14NP02A472JNU00</a>	<a href="#">FA14NP02A472JNU06</a>
NP0	5.6nF	±5%	100	<a href="#">FA14NP02A562JNU00</a>	<a href="#">FA14NP02A562JNU06</a>
NP0	6.8nF	±5%	100	<a href="#">FA14NP02A682JNU00</a>	<a href="#">FA14NP02A682JNU06</a>
NP0	8.2nF	±5%	100	<a href="#">FA14NP02A822JNU00</a>	<a href="#">FA14NP02A822JNU06</a>
NP0	10nF	±5%	100	<a href="#">FA14NP02A103JNU00</a>	<a href="#">FA14NP02A103JNU06</a>

#### CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
X8R	150nF	±10%	25	<a href="#">FA14X8R1E154KNU00</a>	<a href="#">FA14X8R1E154KNU06</a>
X8R	220nF	±10%	25	<a href="#">FA14X8R1E224KNU00</a>	<a href="#">FA14X8R1E224KNU06</a>
X8R	330nF	±10%	25	<a href="#">FA14X8R1E334KNU00</a>	<a href="#">FA14X8R1E334KNU06</a>
X8R	470nF	±10%	25	<a href="#">FA14X8R1E474KRU00</a>	<a href="#">FA14X8R1E474KRU06</a>
X8R	68nF	±10%	50	<a href="#">FA14X8R1H683KNU00</a>	<a href="#">FA14X8R1H683KNU06</a>
X8R	100nF	±10%	50	<a href="#">FA14X8R1H104KNU00</a>	<a href="#">FA14X8R1H104KNU06</a>
X8R	150nF	±10%	50	<a href="#">FA14X8R1H154KRU00</a>	<a href="#">FA14X8R1H154KRU06</a>
X8R	220nF	±10%	50	<a href="#">FA14X8R1H224KRU00</a>	<a href="#">FA14X8R1H224KRU06</a>
X8R	22nF	±10%	100	<a href="#">FA14X8R2A223KNU00</a>	<a href="#">FA14X8R2A223KNU06</a>
X8R	47nF	±10%	100	<a href="#">FA14X8R2A473KRU00</a>	<a href="#">FA14X8R2A473KRU06</a>
X8R	68nF	±10%	100	<a href="#">FA14X8R2A683KRU00</a>	<a href="#">FA14X8R2A683KRU06</a>

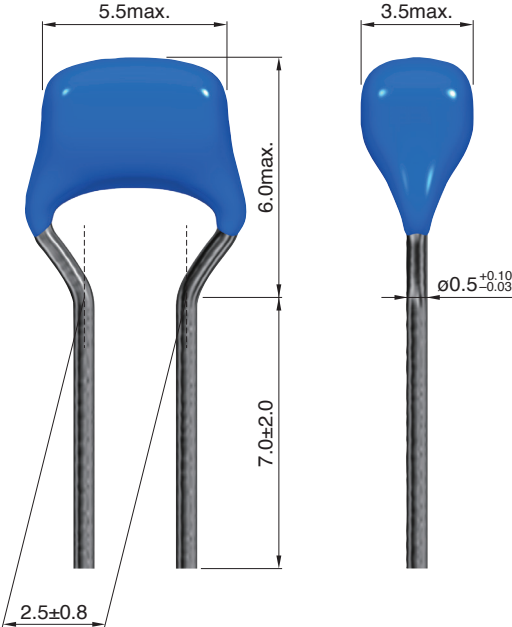
■ Gray items: These products are not recommended for new designs.

Click the part numbers for details.

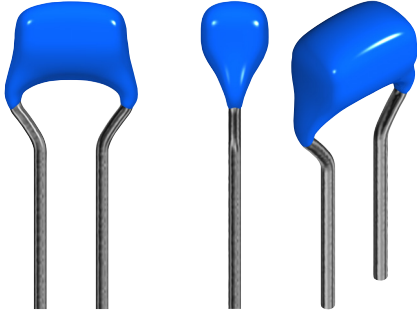
\* The part numbers are TDK's standard specification products.


# FA16 type

## ■ SHAPE & DIMENSIONS



Dimensions in mm



 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.

# FA16 type

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

#### CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
NPO	47nF	±5%	50	<a href="#">FA16NP01H473JNU00</a>	<a href="#">FA16NP01H473JNU06</a>
NPO	68nF	±5%	50	<a href="#">FA16NP01H683JNU00</a>	<a href="#">FA16NP01H683JNU06</a>
NPO	100nF	±5%	50	<a href="#">FA16NP01H104JNU00</a>	<a href="#">FA16NP01H104JNU06</a>
NPO	15nF	±5%	100	<a href="#">FA16NP02A153JNU00</a>	<a href="#">FA16NP02A153JNU06</a>
NPO	22nF	±5%	100	<a href="#">FA16NP02A223JNU00</a>	<a href="#">FA16NP02A223JNU06</a>
NPO	33nF	±5%	100	<a href="#">FA16NP02A333JNU00</a>	<a href="#">FA16NP02A333JNU06</a>

#### CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
X8R	470nF	±10%	25	<a href="#">FA16X8R1E474KNU00</a>	<a href="#">FA16X8R1E474KNU06</a>
X8R	680nF	±10%	25	<a href="#">FA16X8R1E684KNU00</a>	<a href="#">FA16X8R1E684KNU06</a>
X8R	1uF	±10%	25	<a href="#">FA16X8R1E105KNU00</a>	<a href="#">FA16X8R1E105KNU06</a>
X8R	1.5uF	±10%	25	<a href="#">FA16X8R1E155KRU00</a>	<a href="#">FA16X8R1E155KRU06</a>
X8R	2.2uF	±10%	25	<a href="#">FA16X8R1E225KRU00</a>	<a href="#">FA16X8R1E225KRU06</a>
X8R	150nF	±10%	50	<a href="#">FA16X8R1H154KNU00</a>	<a href="#">FA16X8R1H154KNU06</a>
X8R	220nF	±10%	50	<a href="#">FA16X8R1H224KNU00</a>	<a href="#">FA16X8R1H224KNU06</a>
X8R	330nF	±10%	50	<a href="#">FA16X8R1H334KNU00</a>	<a href="#">FA16X8R1H334KNU06</a>
X8R	470nF	±10%	50	<a href="#">FA16X8R1H474KNU00</a>	<a href="#">FA16X8R1H474KNU06</a>
X8R	680nF	±10%	50	<a href="#">FA16X8R1H684KRU00</a>	<a href="#">FA16X8R1H684KRU06</a>
X8R	1uF	±10%	50	<a href="#">FA16X8R1H105KRU00</a>	<a href="#">FA16X8R1H105KRU06</a>
X8R	33nF	±10%	100	<a href="#">FA16X8R2A333KNU00</a>	<a href="#">FA16X8R2A333KNU06</a>
X8R	47nF	±10%	100	<a href="#">FA16X8R2A473KNU00</a>	<a href="#">FA16X8R2A473KNU06</a>
X8R	68nF	±10%	100	<a href="#">FA16X8R2A683KNU00</a>	<a href="#">FA16X8R2A683KNU06</a>
X8R	100nF	±10%	100	<a href="#">FA16X8R2A104KNU00</a>	<a href="#">FA16X8R2A104KNU06</a>
X8R	150nF	±10%	100	<a href="#">FA16X8R2A154KNU00</a>	<a href="#">FA16X8R2A154KNU06</a>
X8R	220nF	±10%	100	<a href="#">FA16X8R2A224KRU00</a>	<a href="#">FA16X8R2A224KRU06</a>
X8R	330nF	±10%	100	<a href="#">FA16X8R2A334KRU00</a>	<a href="#">FA16X8R2A334KRU06</a>

■ Gray items: These products are not recommended for new designs.

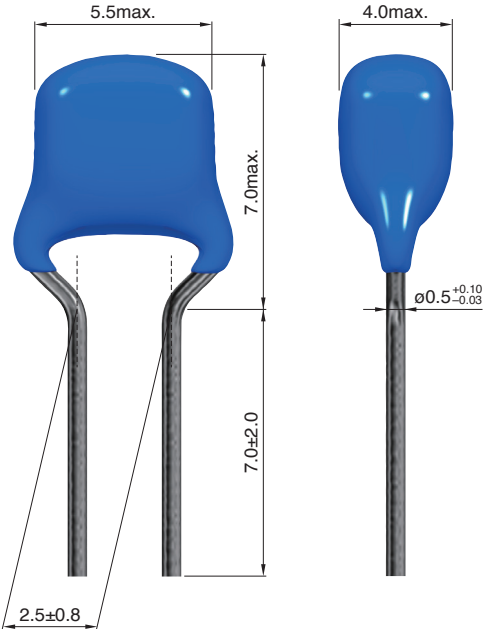
Click the part numbers for details.

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

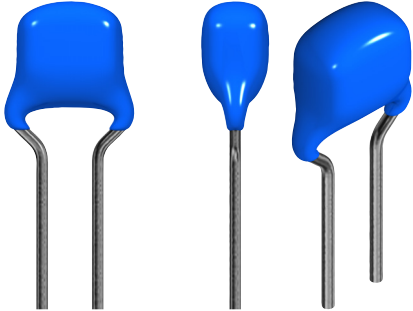



# FA11 type

## ■ SHAPE & DIMENSIONS



Dimensions in mm



 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.

# FA11 type

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

#### CLASS 1 (TEMPERATURE COMPENSATION)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
NP0	68nF	±5%	100	<a href="#">FA11NP02A683JNU00</a>	<a href="#">FA11NP02A683JNU06</a>

#### CLASS 2 (TEMPERATURE STABLE)

Temperature characteristics	Capacitance	Tolerance	Rated voltage Edc (V)	Part No.*	
				Separate	Taping
X8R	1.5uF	±10%	25	<a href="#">FA11X8R1E155KNU00</a>	<a href="#">FA11X8R1E155KNU06</a>
X8R	2.2uF	±10%	25	<a href="#">FA11X8R1E225KNU00</a>	<a href="#">FA11X8R1E225KNU06</a>
X8R	3.3uF	±10%	25	<a href="#">FA11X8R1E335KNU00</a>	<a href="#">FA11X8R1E335KNU06</a>
X8R	4.7uF	±10%	25	<a href="#">FA11X8R1E475KRU00</a>	<a href="#">FA11X8R1E475KRU06</a>
X8R	470nF	±10%	100	<a href="#">FA11X8R2A474KRU00</a>	<a href="#">FA11X8R2A474KRU06</a>
X8R	680nF	±10%	100	<a href="#">FA11X8R2A684KRU00</a>	<a href="#">FA11X8R2A684KRU06</a>

Click the part numbers for details.

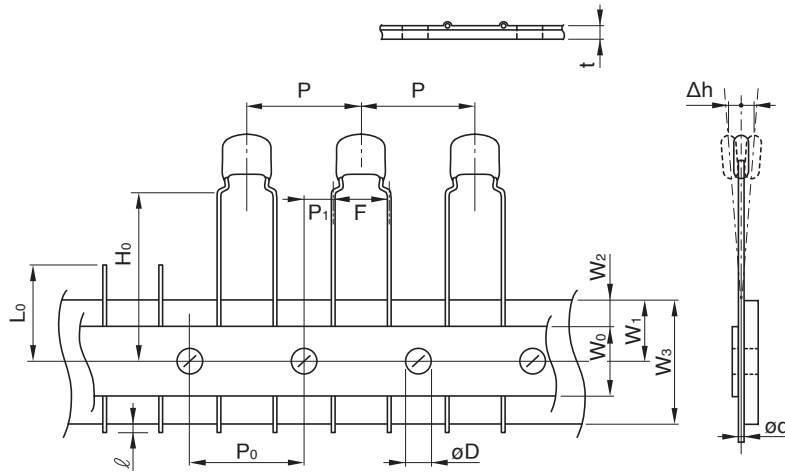
\* The part numbers are TDK's standard specification products.

# PACKAGING STYLE

## TAPING DIMENSIONS

### Lead pitch 5.0 mm

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



Symbol	Dimensions(mm)
P	(12.7)
P <sub>0</sub>	(12.7)
P <sub>1</sub>	(3.85)
W <sub>0</sub>	12.0±1.0
W <sub>1</sub>	9.0±0.5
W <sub>2</sub> <sup>*1</sup>	3.0max.
W <sub>3</sub>	18.0+1.0, -0.5
H <sub>0</sub>	16.0±0.8
ℓ	1.0max.
t	0.6±0.2
L <sub>0</sub> <sup>*2</sup>	11.0max.
F <sup>*3</sup>	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.

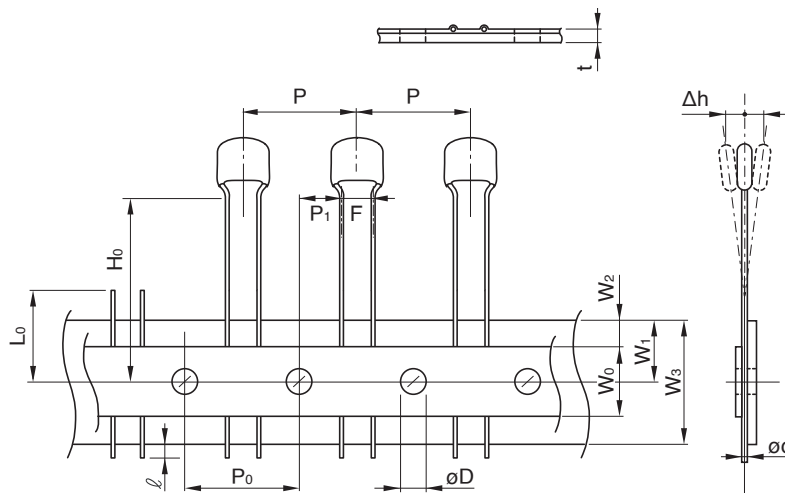
\*1 Adhesive tape shall not stick out from carrier tape.

\*2 The number of consecutive gaps in the product shall be three or less.

\*3 The measurement position should be 1.5 to 2.0 mm below the kink.

### Lead pitch 2.5 mm

(FA18, FA14, FA16, FA11 type)



Symbol	Dimensions(mm)
P	(12.7)
P <sub>0</sub>	(12.7)
P <sub>1</sub>	(5.1)
W <sub>0</sub>	12.0±1.0
W <sub>1</sub>	9.0±0.5
W <sub>2</sub> <sup>*1</sup>	3.0max.
W <sub>3</sub>	18.0+1.0, -0.5
H <sub>0</sub>	16.0±0.8
ℓ	1.0max.
t	0.6±0.2
L <sub>0</sub> <sup>*2</sup>	11.0max.
F <sup>*3</sup>	2.5+0.5, -0.2
ød	ø0.5+0.1, -0.03
øD	(ø4.0)
Δh	(±2)

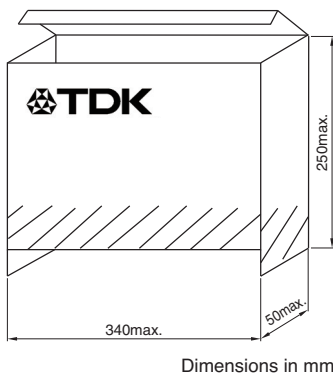
The values in parentheses "( )" are reference values.

\*1 Adhesive tape shall not stick out from carrier tape.

\*2 The number of consecutive gaps in the product shall be three or less.

\*3 The measurement position should be 1.5 to 2.0 mm below the kink.

## AMMO PACK INNER BOX SIZE



⚠ 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.