

3-terminal filters
For power line
Feed through filter



YFF-P series



FEATURES

- Reduction in ESR, ESL and impedance due to the feed-through structure
- Superior attenuation characteristic in wide bandwidth
- Contributes to reduction in the number of decoupling MLCCs
- Available for large current (2 to 6A)

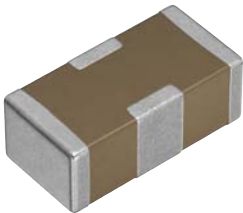
APPLICATION

- EMC countermeasures and decoupling applications in power lines for communication terminal devices such as smartphones, AV and information devices

PART NUMBER CONSTRUCTION

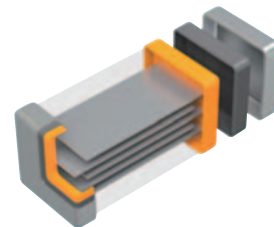
YFF	31		PC		0J		226		M		T		<div>□□</div>		0		N	
Series name	LxW dimensions		Product internal code		Rated voltage		Nominal capacitance		Capacitance tolerance		Packaging style		TDK internal code		Reel size		TDK internal code	
	Code	mm																
	15	1.0×0.5	PC	Standard type	0G	4V	104	100,000pF	M	±20%	T	Taping			0	ø178mm	N	Internal electrode Ni
	18	1.6×0.8	PH	Thickness 0.8mm	0J	6.3V	105	1,000,000pF (1.0μF)							9	ø330mm	E	Internal electrode Ni
	21	2.0×1.2	PW	Low ESL type	1A	10V												
31	3.2×1.6				1C	16V	435	4,300,000pF (4.3μF)										
							226	22,000,000pF (22μF)										

PRODUCT APPEARANCE



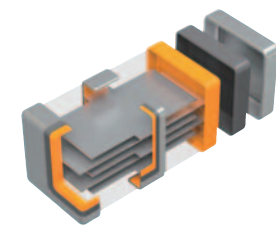
PRODUCT STRUCTURES

MLCC



Internal electrodes are not conducting between terminal electrodes

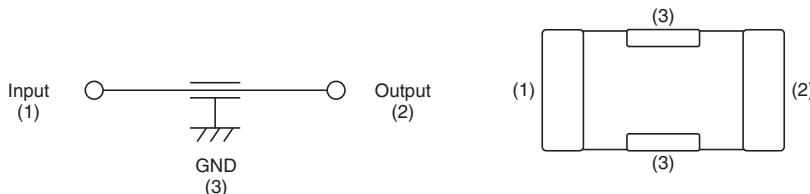
YFF type



Feed-through structure that direct current passes inside the component

■ Sn
■ Ni
■ Cu

EQUIVALENT CIRCUIT



YFF15PC type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

Insertion loss 40dB bandwidth (MHz)	Rated voltage Edc (V)	Rated current Idc (A)	DC resistance (Max.) Rdc (mΩ)	Operating temperature range (°C)	Storage temperature range (After mount) (°C)	Catalog part numbers
0.3 to 1700	4	2	12	-55 to +85	-55 to +85	YFF15PC0G435MT000N
0.3 to 1700	4	2	12	-55 to +85	-55 to +85	YFF15PC0G435MT009N
1 to 2600	6.3	2	30	-55 to +125	-55 to +125	YFF15PC0J105MT0A0E
0.8 to 1800	6.3	3	12	-55 to +105	-55 to +105	YFF15PC0J105MT000N
0.8 to 1800	6.3	3	12	-55 to +105	-55 to +105	YFF15PC0J105MT009N
0.8 to 1800	4	3	12	-55 to +105	-55 to +105	YFF15PC0G105MT000N
0.8 to 1800	4	3	12	-55 to +105	-55 to +105	YFF15PC0G105MT009N
2 to 1700	6.3	3	30	-55 to +105	-55 to +105	YFF15PC0J474MT000N
2 to 1700	6.3	3	30	-55 to +105	-55 to +105	YFF15PC0J474MT009N
4 to 1300	10	3	30	-55 to +105	-55 to +105	YFF15PC1A224MT000N
4 to 1300	10	3	30	-55 to +105	-55 to +105	YFF15PC1A224MT009N
9 to 1300	16	3	30	-55 to +105	-55 to +105	YFF15PC1C104MT000N
9 to 1300	16	3	30	-55 to +105	-55 to +105	YFF15PC1C104MT009N

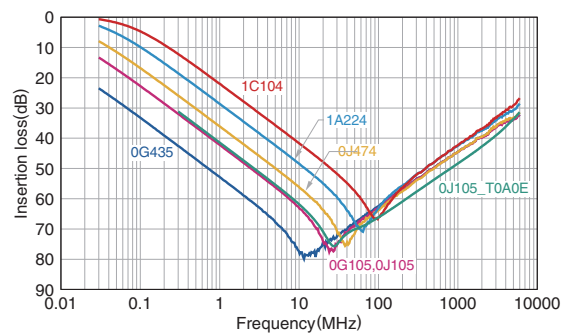
Click the part number for details.

The rated current depends on the operating temperature. For details, refer to RATED CURRENT DERATING graph below.

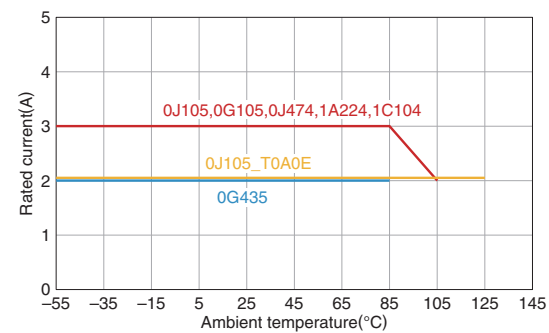
The maximum operating temperature includes capacitor self-heating of up to 20°C.

ELECTRICAL CHARACTERISTICS GRAPH

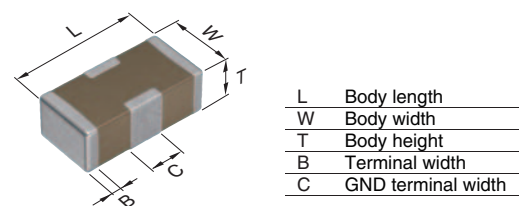
INSERTION LOSS vs. FREQUENCY



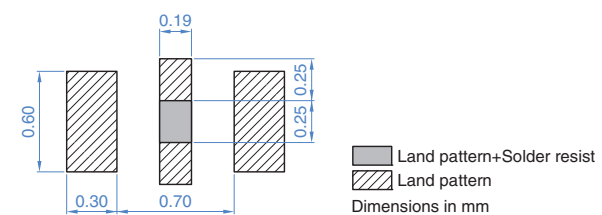
RATED CURRENT DERATING



SHAPE & DIMENSIONS



RECOMMENDED LAND PATTERN



Connect GND terminals and GND of circuit boards by using such as through-holes so that the distance between them becomes the shortest.

L (mm)	W (mm)	T (mm)	B (mm)	C (mm)	Reel size (mm)	Package quantity (pcs./reel)	Catalog part numbers
1.05±0.05	0.65±0.05	0.45±0.05	0.09 min.	0.30±0.10	ø178	10,000	YFF15PC0G435MT000N
1.05±0.05	0.65±0.05	0.45±0.05	0.09 min.	0.30±0.10	ø330	50,000	YFF15PC0G435MT009N
1.00±0.20	0.50±0.20	0.40±0.10	0.18±0.10	0.30±0.10	ø178	10,000	YFF15PC0J105MT0A0E
1.00±0.05	0.55±0.05	0.30±0.05	0.09 min.	0.30±0.10	ø178	10,000	YFF15PC0J105MT000N
1.00±0.05	0.55±0.05	0.30±0.05	0.09 min.	0.30±0.10	ø330	50,000	YFF15PC0J105MT009N
1.00±0.05	0.55±0.05	0.30±0.05	0.09 min.	0.30±0.10	ø178	10,000	YFF15PC0G105MT000N
1.00±0.05	0.55±0.05	0.30±0.05	0.09 min.	0.30±0.10	ø330	50,000	YFF15PC0G105MT009N
1.00±0.05	0.55±0.05	0.30±0.05	0.09 min.	0.30±0.10	ø178	10,000	YFF15PC0J474MT000N
1.00±0.05	0.55±0.05	0.30±0.05	0.09 min.	0.30±0.10	ø330	50,000	YFF15PC0J474MT009N
1.00±0.05	0.55±0.05	0.30±0.05	0.09 min.	0.30±0.10	ø178	10,000	YFF15PC1A224MT000N
1.00±0.05	0.55±0.05	0.30±0.05	0.09 min.	0.30±0.10	ø330	50,000	YFF15PC1A224MT009N
1.00±0.05	0.55±0.05	0.30±0.05	0.09 min.	0.30±0.10	ø178	10,000	YFF15PC1C104MT000N
1.00±0.05	0.55±0.05	0.30±0.05	0.09 min.	0.30±0.10	ø330	50,000	YFF15PC1C104MT009N

Click the part number for details.

YFF18PC type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

Insertion loss 40dB bandwidth (MHz)	Rated voltage Edc (V)	Rated current Idc (A)	DC resistance (Max.) Rdc (mΩ)	Operating temperature range (°C)	Storage temperature range (After mount) (°C)	Catalog part numbers
0.2 to 1500	6.3	4	12	-55 to +85	-55 to +85	YFF18PC0J475MT0H0N
0.2 to 1500	6.3	4	12	-55 to +85	-55 to +85	YFF18PC0J475MT0H9N
0.8 to 1600	6.3	4	12	-55 to +105	-55 to +105	YFF18PC0J105MT0H0N
0.8 to 1600	6.3	4	12	-55 to +105	-55 to +105	YFF18PC0J105MT0H9N
2 to 1100	6.3	4	30	-55 to +125	-55 to +125	YFF18PC0J474MT0H0N
2 to 1100	6.3	4	30	-55 to +125	-55 to +125	YFF18PC0J474MT0H9N
3 to 1800	6.3	4	30	-55 to +125	-55 to +125	YFF18PC0J224MT0H0N
3 to 1800	6.3	4	30	-55 to +125	-55 to +125	YFF18PC0J224MT0H9N
7 to 1100	16	4	30	-55 to +125	-55 to +125	YFF18PC1C104MT0H0N
7 to 1100	16	4	30	-55 to +125	-55 to +125	YFF18PC1C104MT0H9N

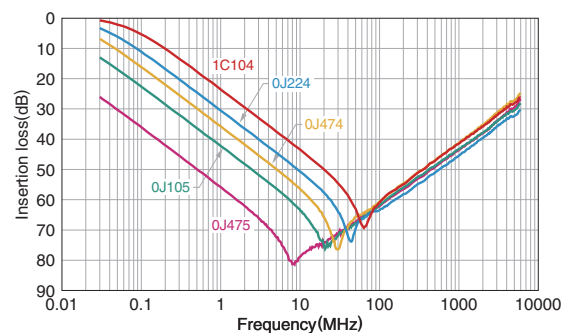
Click the part number for details.

The rated current depends on the operating temperature. For details, refer to RATED CURRENT DERATING graph below.

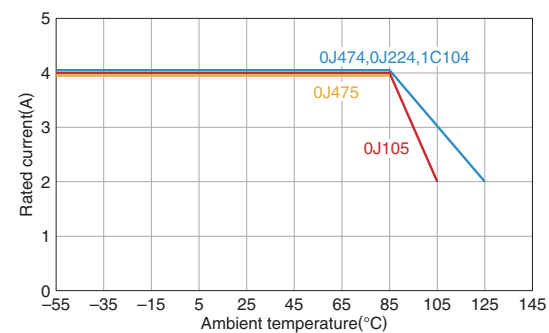
The maximum operating temperature includes capacitor self-heating of up to 20°C.

ELECTRICAL CHARACTERISTICS GRAPH

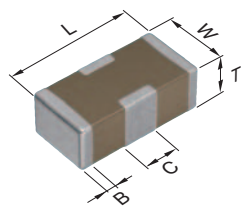
INSERTION LOSS vs. FREQUENCY



RATED CURRENT DERATING

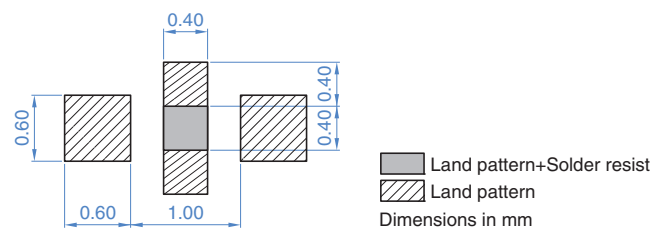


SHAPE & DIMENSIONS



L	Body length
W	Body width
T	Body height
B	Terminal width
C	GND terminal width

RECOMMENDED LAND PATTERN



Connect GND terminals and GND of circuit boards by using such as through-holes so that the distance between them becomes the shortest.

L (mm)	W (mm)	T (mm)	B (mm)	C (mm)	Reel size (mm)	Package quantity (pcs./reel)	Catalog part numbers
1.60±0.20	0.80±0.10	0.60±0.10	0.25±0.15	0.40±0.10	ø178	4,000	YFF18PC0J475MT0H0N
1.60±0.20	0.80±0.10	0.60±0.10	0.25±0.15	0.40±0.10	ø330	10,000	YFF18PC0J475MT0H9N
1.60±0.20	0.80±0.10	0.60±0.10	0.25±0.15	0.40±0.10	ø178	4,000	YFF18PC0J105MT0H0N
1.60±0.20	0.80±0.10	0.60±0.10	0.25±0.15	0.40±0.10	ø330	10,000	YFF18PC0J105MT0H9N
1.60±0.20	0.80±0.10	0.60±0.10	0.25±0.15	0.40±0.10	ø178	4,000	YFF18PC0J474MT0H0N
1.60±0.20	0.80±0.10	0.60±0.10	0.25±0.15	0.40±0.10	ø330	10,000	YFF18PC0J474MT0H9N
1.60±0.20	0.80±0.10	0.60±0.10	0.25±0.15	0.40±0.10	ø178	4,000	YFF18PC0J224MT0H0N
1.60±0.20	0.80±0.10	0.60±0.10	0.25±0.15	0.40±0.10	ø330	10,000	YFF18PC0J224MT0H9N
1.60±0.20	0.80±0.10	0.60±0.10	0.25±0.15	0.40±0.10	ø178	4,000	YFF18PC1C104MT0H0N
1.60±0.20	0.80±0.10	0.60±0.10	0.25±0.15	0.40±0.10	ø330	10,000	YFF18PC1C104MT0H9N

Click the part number for details.

YFF18PH type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

Insertion loss 40dB bandwidth (MHz)	Rated voltage Edc (V)	Rated current Idc (A)	DC resistance (Max.) Rdc (mΩ)	Operating temperature range (°C)	Storage temperature range (After mount) (°C)	Catalog part numbers
0.3 to 1700	6.3	4	10	-55 to +125	-55 to +125	YFF18PHQJ106MT00HE
0.4 to 1500	6.3	4	12	-55 to +85	-55 to +85	YFF18PHQJ225MT000N
0.4 to 1500	6.3	4	12	-55 to +85	-55 to +85	YFF18PHQJ225MT009N
0.7 to 1100	6.3	4	12	-55 to +105	-55 to +105	YFF18PHQJ105MT000N
0.7 to 1100	6.3	4	12	-55 to +105	-55 to +105	YFF18PHQJ105MT009N

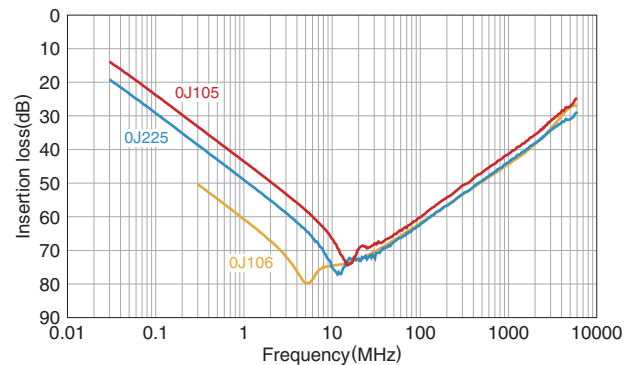
Click the part number for details.

The rated current depends on the operating temperature. For details, refer to RATED CURRENT DERATING graph below.

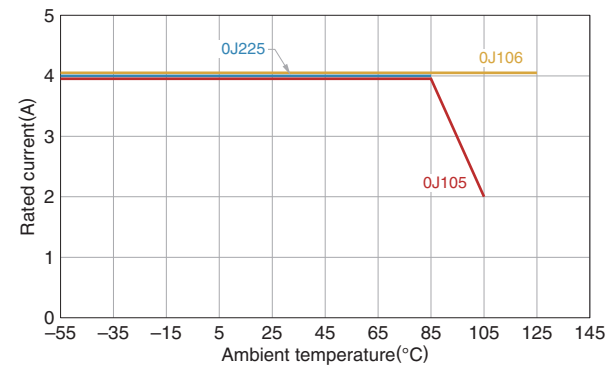
The maximum operating temperature includes capacitor self-heating of up to 20°C.

ELECTRICAL CHARACTERISTICS GRAPH

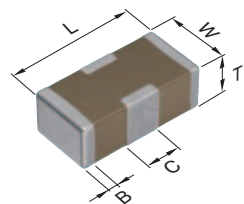
INSERTION LOSS vs. FREQUENCY



RATED CURRENT DERATING

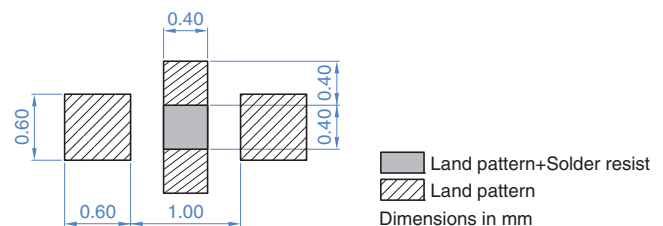


SHAPE & DIMENSIONS



L	Body length
W	Body width
T	Body height
B	Terminal width
C	GND terminal width

RECOMMENDED LAND PATTERN



Connect GND terminals and GND of circuit boards by using such as through-holes so that the distance between them becomes the shortest.

L (mm)	W (mm)	T (mm)	B (mm)	C (mm)	Reel size (mm)	Package quantity (pcs./reel)	Catalog part numbers
1.60+0.30,-0.10	0.80+0.30,-0.10	0.80+0.30,-0.10	0.25±0.20	0.40±0.20	ø178	3,000	YFF18PHQJ106MT00HE
1.60±0.20	0.80±0.10	0.80±0.10	0.25±0.15	0.40±0.10	ø178	4,000	YFF18PHQJ225MT000N
1.60±0.20	0.80±0.10	0.80±0.10	0.25±0.15	0.40±0.10	ø330	10,000	YFF18PHQJ225MT009N
1.60±0.20	0.80±0.10	0.80±0.10	0.25±0.15	0.40±0.10	ø178	4,000	YFF18PHQJ105MT000N
1.60±0.20	0.80±0.10	0.80±0.10	0.25±0.15	0.40±0.10	ø330	10,000	YFF18PHQJ105MT009N

Click the part number for details.

YFF18PW type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

Insertion loss 40dB bandwidth (MHz)	Rated voltage Edc (V)	Rated current Idc (A)	DC resistance (Max.) Rdc (mΩ)	Operating temperature range (°C)	Storage temperature range (After mount) (°C)	Catalog part numbers
0.2 to 2700	6.3	4	12	-55 to +85	-55 to +85	YFF18PWQJ475MT0H0N
0.2 to 2700	6.3	4	12	-55 to +85	-55 to +85	YFF18PWQJ475MT0H9N
0.8 to 2400	6.3	4	30	-55 to +105	-55 to +105	YFF18PWQJ105MT0H0N
0.8 to 2400	6.3	4	30	-55 to +105	-55 to +105	YFF18PWQJ105MT0H9N
2 to 2400	6.3	4	30	-55 to +125	-55 to +125	YFF18PWQJ474MT0H0N
2 to 2400	6.3	4	30	-55 to +125	-55 to +125	YFF18PWQJ474MT0H9N

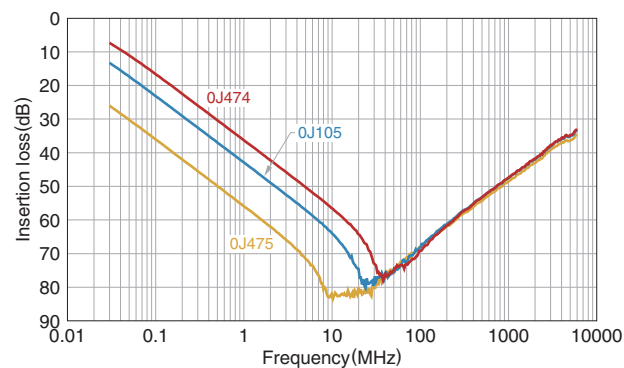
Click the part number for details.

The rated current depends on the operating temperature. For details, refer to RATED CURRENT DERATING graph below.

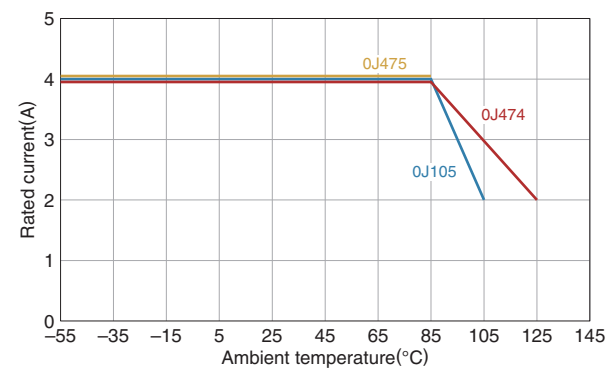
The maximum operating temperature includes capacitor self-heating of up to 20°C.

ELECTRICAL CHARACTERISTICS GRAPH

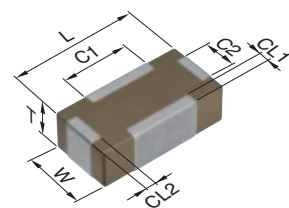
INSERTION LOSS vs. FREQUENCY



RATED CURRENT DERATING

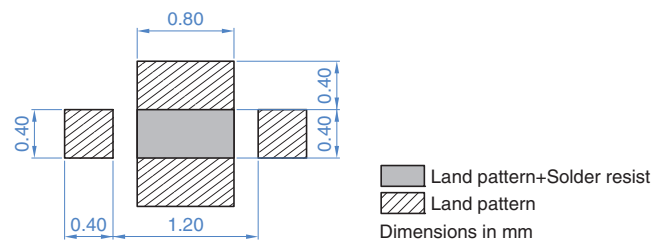


SHAPE & DIMENSIONS



L	Body length
W	Body width
T	Body height
C1	GND terminal width 1
CL1	GND terminal width 2
C2	Terminal width 1
CL2	Terminal width 2

RECOMMENDED LAND PATTERN



Connect GND terminals and GND of circuit boards by using such as through-holes so that the distance between them becomes the shortest.

L (mm)	W (mm)	T (mm)	C1 (mm)	CL1 (mm)	C2 (mm)	CL2 (mm)	Reel size(mm)	Package quantity (pcs./reel)	Catalog part numbers
1.60±0.10	0.80±0.10	0.60±0.10	0.80+0.20,-0.10	0.15±0.10	0.40±0.10	0.15±0.10	ø178	4,000	YFF18PWQJ475MT0H0N
1.60±0.10	0.80±0.10	0.60±0.10	0.80+0.20,-0.10	0.15±0.10	0.40±0.10	0.15±0.10	ø330	10,000	YFF18PWQJ475MT0H9N
1.60±0.10	0.80±0.10	0.60±0.10	0.80+0.20,-0.10	0.15±0.10	0.40±0.10	0.15±0.10	ø178	4,000	YFF18PWQJ105MT0H0N
1.60±0.10	0.80±0.10	0.60±0.10	0.80+0.20,-0.10	0.15±0.10	0.40±0.10	0.15±0.10	ø330	10,000	YFF18PWQJ105MT0H9N
1.60±0.10	0.80±0.10	0.60±0.10	0.80+0.20,-0.10	0.15±0.10	0.40±0.10	0.15±0.10	ø178	4,000	YFF18PWQJ474MT0H0N
1.60±0.10	0.80±0.10	0.60±0.10	0.80+0.20,-0.10	0.15±0.10	0.40±0.10	0.15±0.10	ø330	10,000	YFF18PWQJ474MT0H9N

Click the part number for details.

YFF21PC type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

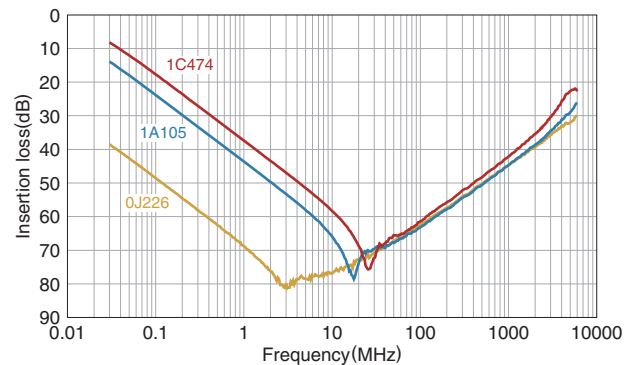
Insertion loss 40dB bandwidth (MHz)	Rated voltage Edc (V)	Rated current Idc (A)	DC resistance (Max.) Rdc (mΩ)	Operating temperature range (°C)	Storage temperature range (After mount) (°C)	Catalog part numbers
0.04 to 1700	6.3	4	5	-55 to +85	-55 to +85	YFF21PC0J226MT000N
0.04 to 1700	6.3	4	5	-55 to +85	-55 to +85	YFF21PC0J226MT009N
0.7 to 1600	10	4	12	-55 to +85	-55 to +85	YFF21PC1A105MT000N
0.7 to 1600	10	4	12	-55 to +85	-55 to +85	YFF21PC1A105MT009N
2 to 1200	16	2	30	-55 to +125	-55 to +125	YFF21PC1C474MT000N
2 to 1200	16	2	30	-55 to +125	-55 to +125	YFF21PC1C474MT009N

Click the part number for details.

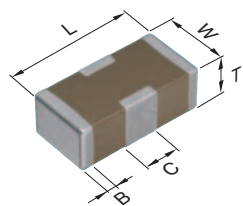
The maximum operating temperature includes capacitor self-heating of up to 20°C.

ELECTRICAL CHARACTERISTICS GRAPH

INSERTION LOSS vs. FREQUENCY

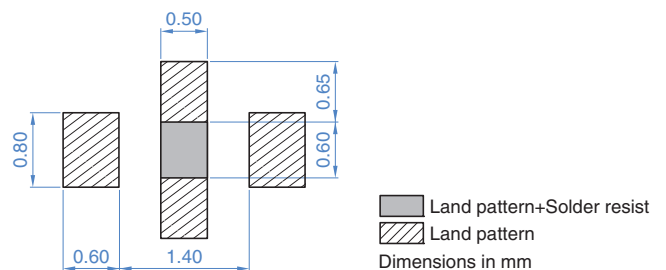


SHAPE & DIMENSIONS



L	Body length
W	Body width
T	Body height
B	Terminal width
C	GND terminal width

RECOMMENDED LAND PATTERN



Connect GND terminals and GND of circuit boards by using such as through-holes so that the distance between them becomes the shortest.

L (mm)	W (mm)	T (mm)	B (mm)	C (mm)	Reel size (mm)	Package quantity (pcs./reel)	Catalog part numbers
2.00±0.20	1.25±0.20	0.85±0.15	0.30±0.10	0.45±0.15	ø178	4,000	YFF21PC0J226MT000N
2.00±0.20	1.25±0.20	0.85±0.15	0.30±0.10	0.45±0.15	ø330	10,000	YFF21PC0J226MT009N
2.00±0.20	1.25±0.20	0.85±0.15	0.30±0.10	0.45±0.15	ø178	4,000	YFF21PC1A105MT000N
2.00±0.20	1.25±0.20	0.85±0.15	0.30±0.10	0.45±0.15	ø330	10,000	YFF21PC1A105MT009N
2.00±0.20	1.25±0.20	0.85±0.15	0.30±0.10	0.45±0.15	ø178	4,000	YFF21PC1C474MT000N
2.00±0.20	1.25±0.20	0.85±0.15	0.30±0.10	0.45±0.15	ø330	10,000	YFF21PC1C474MT009N

Click the part number for details.

YFF31PC type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

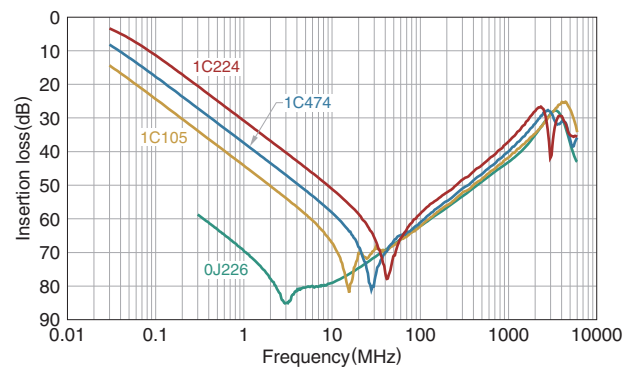
Insertion loss 40dB bandwidth (MHz)	Rated voltage Edc (V)	Rated current Idc (A)	DC resistance (Max.) Rdc (mΩ)	Operating temperature range (°C)	Storage temperature range (After mount) (°C)	Catalog part numbers
0.3 to 1300	6.3	6	5	-55 to +125	-55 to +125	YFF31PC0J226MTJ00N
0.7 to 1200	16	2	40	-55 to +125	-55 to +125	YFF31PC1C105MT000N
0.7 to 1200	16	2	40	-55 to +125	-55 to +125	YFF31PC1C105MT009N
2 to 1000	16	2	40	-55 to +125	-55 to +125	YFF31PC1C474MT000N
2 to 1000	16	2	40	-55 to +125	-55 to +125	YFF31PC1C474MT009N
3 to 700	16	2	40	-55 to +125	-55 to +125	YFF31PC1C224MT000N
3 to 700	16	2	40	-55 to +125	-55 to +125	YFF31PC1C224MT009N

Click the part number for details.

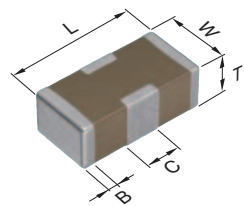
The maximum operating temperature includes capacitor self-heating of up to 20°C.

ELECTRICAL CHARACTERISTICS GRAPH

INSERTION LOSS vs. FREQUENCY

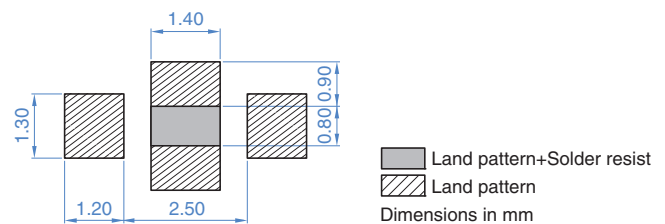


SHAPE & DIMENSIONS



L	Body length
W	Body width
T	Body height
B	Terminal width
C	GND terminal width

RECOMMENDED LAND PATTERN



Connect GND terminals and GND of circuit boards by using such as through-holes so that the distance between them becomes the shortest.

L (mm)	W (mm)	T (mm)	B (mm)	C (mm)	Reel size (mm)	Package quantity (pcs./reel)	Catalog part numbers
3.20±0.20	1.60±0.20	1.30±0.20	0.40±0.30	1.10±0.40	ø178	2,000	YFF31PC0J226MTJ00N
3.20±0.20	1.60±0.20	1.30±0.20	0.40±0.30	0.95±0.25	ø178	2,000	YFF31PC1C105MT000N
3.20±0.20	1.60±0.20	1.30±0.20	0.40±0.30	0.95±0.25	ø330	10,000	YFF31PC1C105MT009N
3.20±0.20	1.60±0.20	1.30±0.20	0.40±0.30	0.95±0.25	ø178	2,000	YFF31PC1C474MT000N
3.20±0.20	1.60±0.20	1.30±0.20	0.40±0.30	0.95±0.25	ø330	10,000	YFF31PC1C474MT009N
3.20±0.20	1.60±0.20	1.30±0.20	0.40±0.30	0.95±0.25	ø178	2,000	YFF31PC1C224MT000N
3.20±0.20	1.60±0.20	1.30±0.20	0.40±0.30	0.95±0.25	ø330	10,000	YFF31PC1C224MT009N

Click the part number for details.

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 on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.

The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.

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 the each catalog, please contact us.

- | | |
|--|--|
| (1) Aerospace/aviation equipment | (8) Public information-processing equipment |
| (2) Transportation equipment (cars, electric trains, ships, etc.) | (9) Military equipment |
| (3) Medical equipment (excepting Pharmaceutical Affairs Law classification Class1,2) | (10) Electric heating apparatus, burning equipment |
| (4) Power-generation control equipment | (11) Disaster prevention/crime prevention equipment |
| (5) Atomic energy-related equipment | (12) Safety equipment |
| (6) Seabed equipment | (13) Other applications that are not considered general-purpose applications |
| (7) Transportation control equipment | |

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.

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.
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