June 2017

3-terminal Filters, SMD Array

For high-speed signal line (cellular band compatible)

MEA-PH Series

MEA1210PH Type

MEA1210PH	**1210[0504 inch]***

* Dimensions Code JIS[EIA]

⚠ Caution

The products in this catalog will be or have been stopped production

Discontinue Issue Date	May 18, 2017
Last Purchase Order Date	Mar. 29, 2019
Last Shipment Date	Sep. 30, 2019

Please refer to our Web site about replacement information.

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 these products.

⚠ REMINDERS

- The storage period is less than 12 months. Be sure to follow the storage conditions (Temperature: 5 to 40°C, Humidity: 10 to 75% RH or less).
  If the storage period elapses, the soldering of the terminal electrodes may deteriorate.
- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- Before soldering, be sure to preheat components.
  The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications.
  If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- Carefully lay out the coil for the circuit board design of the non-magnetic shield type.
  A malfunction may occur due to magnetic interference.
- Use a wrist band to discharge static electricity in your body through the grounding wire.
- Do not expose the products to magnets or magnetic fields.
- Do not use for a purpose outside of the contents regulated in the delivery specifications.
- 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
(2) Transportation equipment (cars, electric trains, ships, etc.)
(3) Medical equipment
(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.

3-terminal Filters, SMD Array

For high-speed signal line (cellular band compatible)

Product compatible with RoHS directive
Halogen-free
Compatible with lead-free solders

Overview of MEA1210PH Type

FEATURES

- Single chip for 2-line filters, and compatible with high-density mounting.
- Compact with a low profile design.
- Effective as a desensitization countermeasure in information transmission terminals such as smart phones.
- Can be used for signal lines of mobile device displays.

APPLICATION

Noise removal from signal lines of smart phones, digital cameras, PCs, game machines, flat TVs, etc.

PART NUMBER CONSTRUCTION

MEA	1210	PH	270	T	001
Series name	L×W×T Dimensions (mm)	Product internal code	Capacitance (pF)	Packaging style	Internal code
	1210 1.2×1.0×0.5	PH	270 27 150 15	T Taping	

OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY, PRODUCT WEIGHT

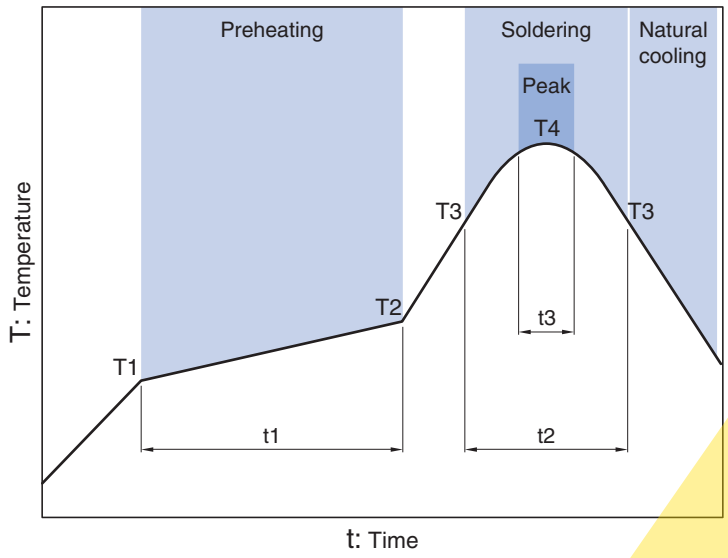
Type	Temperature range		Package quantity	Individual weight
	Operating temperature (°C)	Storage temperature* (°C)	(pieces/reel)	(mg)
MEA1210PH	–40 to +85	–40 to +85	4,000	3

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

○ RoHS Directive Compliant Product: See the following for more details.https://product.tdk.com/info/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.

MEA1210PH Type

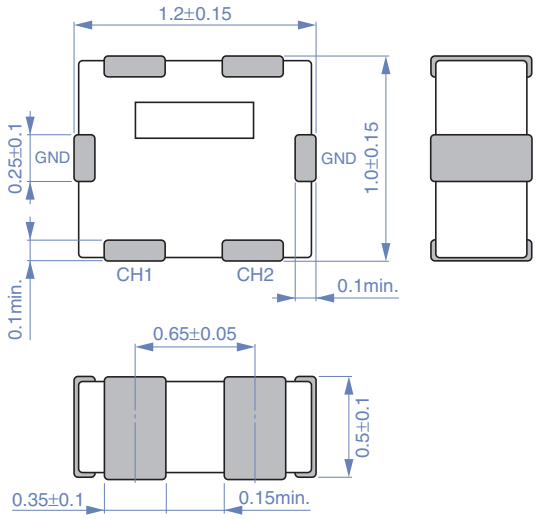
RECOMMENDED REFLOW PROFILE



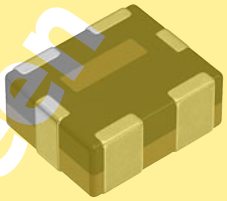
Preheating			Soldering		Peak	
Temp.		Time	Temp.	Time	Temp.	Time
T1	T2	t1	T3	t2	T4	t3
150°C	180°C	60 to 120s	230°C	30 to 60s	250 to 260°C	10s max.

MEA1210PH Type

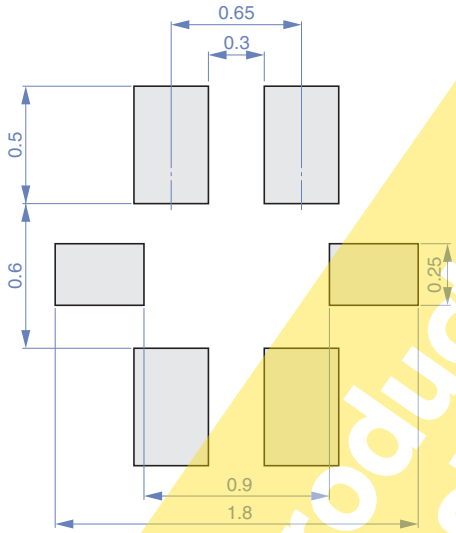
SHAPE & DIMENSIONS



Dimensions in mm

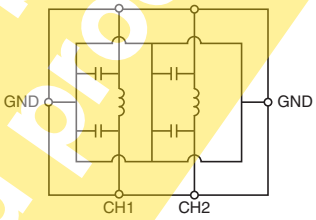


RECOMMENDED LAND PATTERN



Dimensions in mm

CIRCUIT DIAGRAM



MEA1210PH Type

■ELECTRICAL CHARACTERISTICS

□CHARACTERISTICS SPECIFICATION TABLE

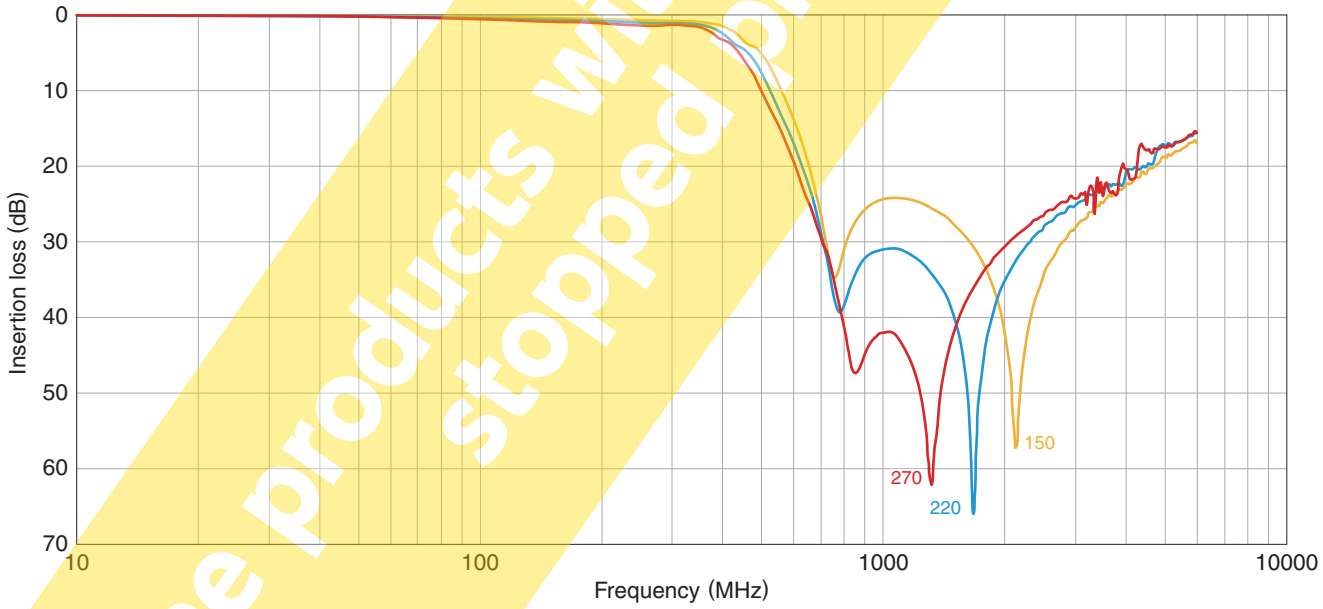
Capacitance (pF)	Cutoff frequency (MHz)typ.	Insertion loss 20dB frequency range (MHz)	Rated voltage (V)max.	Rated current (mA)max.	Part No.
27	390	800 to 3000	6.3	100	MEA1210PH270T001
22	410	800 to 3000	6.3	100	MEA1210PH220T001
15	430	800 to 3000	6.3	100	MEA1210PH150T001

○ Measurement equipment

Measurement item	Product No.	Manufacturer
Capacitance	4294A	Keysight Technologies
Frequency characteristics	N5230C	Keysight Technologies

＊ Equivalent measurement equipment may be used.

□INSERTION LOSS VS. FREQUENCY CHARACTERISTICS



○ Measurement equipment

Product No.	Manufacturer
N5230C	Keysight Technologies

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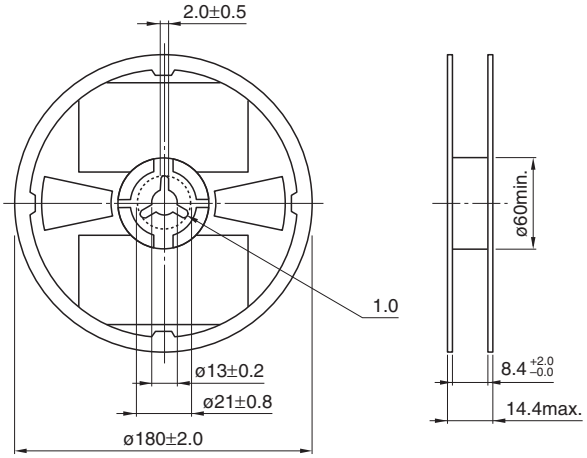
MEA1210PH Type

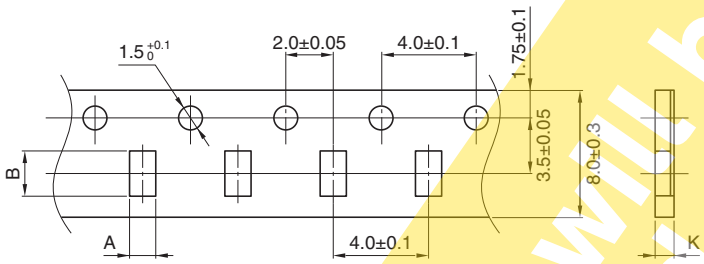
PACKAGING STYLE

REEL DIMENSIONS



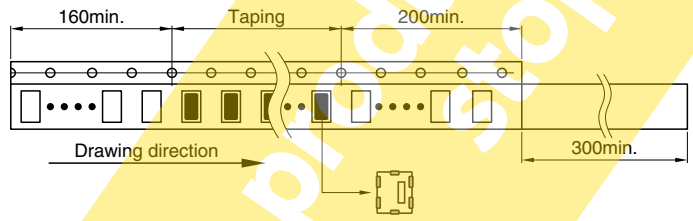
Dimensions in mm

TAPE DIMENSIONS



Dimensions in mm

Type	A	B	K
MEA1210PH	1.20±0.05	1.45±0.05	0.73max.



Dimensions in mm