

Chip EMI Filters

Type: **EXCET**



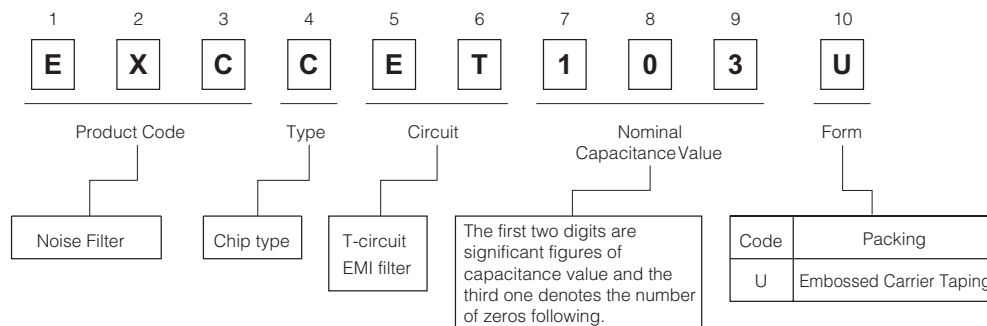
■ Features

- Rated current (2 A max.)
- Eight capacitance values in a wide range, related to the noise frequency
- Suitable for narrow pitch insertion
- Suitable for applications requiring thin design
- RoHS compliant

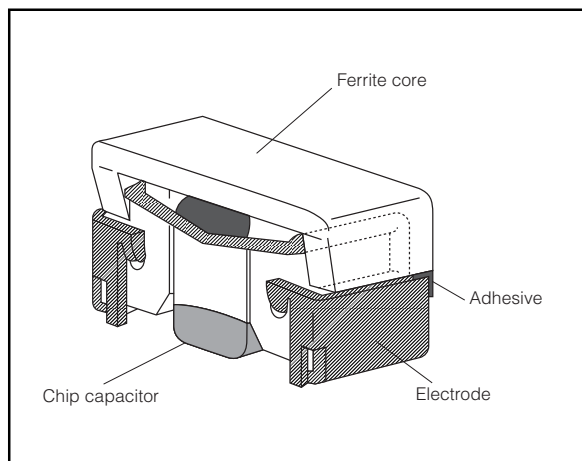
■ Recommended Applications

- Digital equipment such as PCs, word processors, printers, HDD, PPC, and communication equipment.
- Digital audio and video equipment.
- AC adapters, and switching power supplies.
- Electronic musical instruments, and other digital equipment.

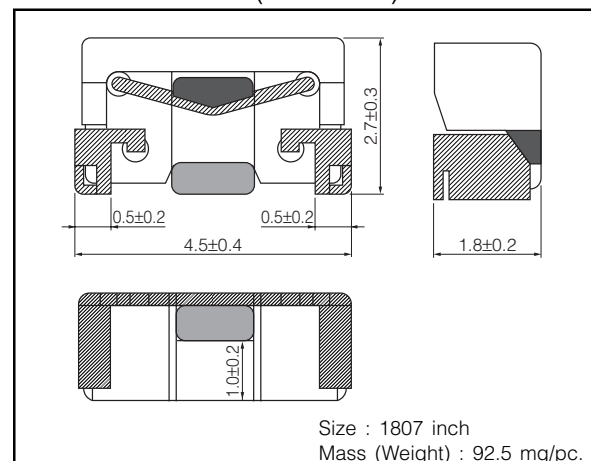
■ Explanation of Part Numbers



■ Construction



■ Dimensions in mm (not to scale)



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■ Ratings

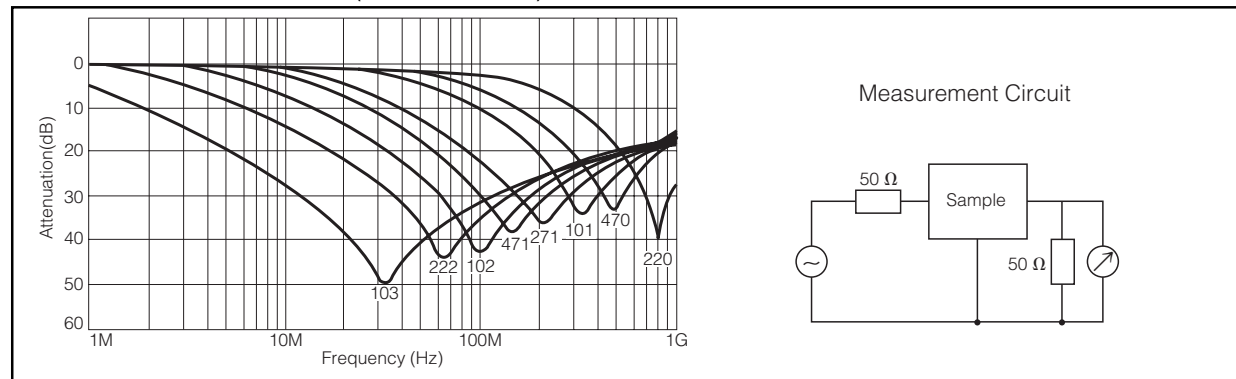
Part Number	Rated Voltage (V DC)	Capacitance ⁽¹⁾ (pF)	Tolerance (%)	Characteristics ⁽²⁾	Rated Current (A DC)	DC Resistance (mΩ)	25 dB Attenuate Frequency (MHz)	15 dB Attenuate Frequency (MHz)
EXCCET220U	50	22	±20	YB	2	50 max.	800 to 1000	600 to 1000
EXCCET470U	50	47	±20	YB	2	50 max.	450 to 550	350 to 1000
EXCCET101U	50	100	±20	YB	2	50 max.	300 to 450	200 to 900
EXCCET271U	50	270	±20	YB	2	50 max.	200 to 300	80 to 700
EXCCET471U	50	470	±20	YB	2	50 max.	100 to 220	50 to 700
EXCCET102U	50	1000	±20	YB	2	50 max.	65 to 200	30 to 700
EXCCET222U	50	2200	±20	YB	2	50 max.	35 to 180	15 to 700
EXCCET103U	50	10000	±20	YB	2	50 max.	15 to 120	15 to 700

(1) Please inquire to us about the particular capacitance value, on a range of 22 to 10000 pF.

(2) Characteristics YB: Maximum capacitance is ±10 % over the temperature range of -25 °C to +85 °C in reference to +20 °C.

- Category Temperature Range -40 °C to +85 °C

■ Attenuation Characteristics (Reference Data)

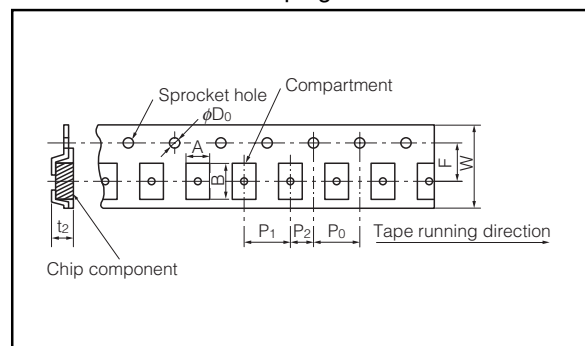


■ Packaging Methods (Taping)

- Standard Quantity

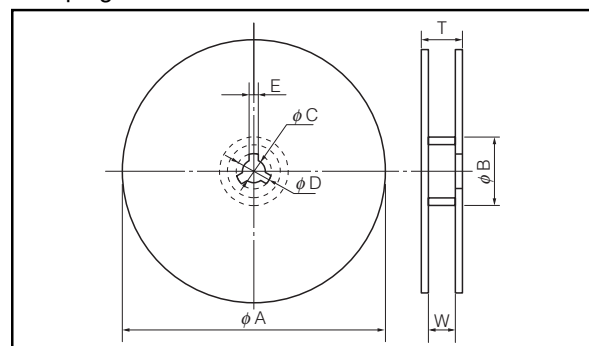
Part Number	Kind of Taping	Pitch (P ₁)	Quantity
EXCCET□□□U	Embossed Carrier Taping	4 mm	1000 pcs./reel

● Embossed Carrier Taping



	A	B	W	F	P ₁
Dimensions (mm)	2.2±0.2	4.9±0.2	12.0±0.2	5.50±0.05	4.0±0.1
	P ₂	P ₀	φD ₀	t ₂	
Dimensions (mm)	2.0±0.1	4.0±0.1	1.5±0.1	3.5 max.	

● Taping Reel



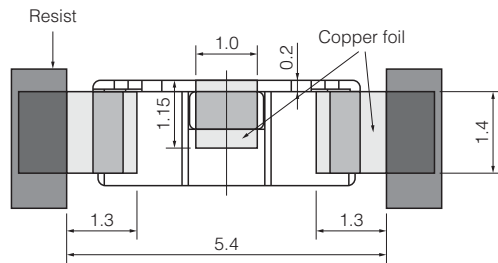
	φA	φB	φC	φD
Dimensions (mm)	180.0 ⁰ _{-3.0}	60.0±1.0	13.0±0.5	21.0±0.8
	E	W	T	
Dimensions (mm)	2.0±0.5	13.0±1.0	16.5 max.	

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01 Feb. 2011

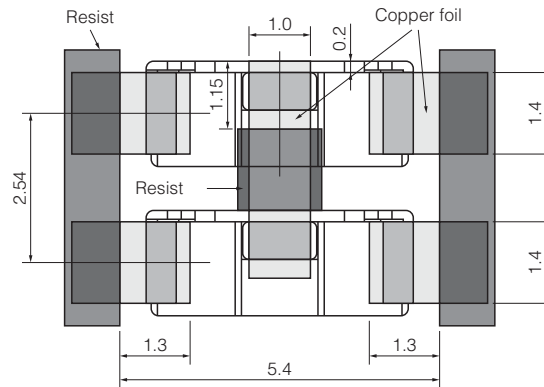
Recommended Land Pattern Design(mm)

For Single Mounting



Using the land pattern which we do not recommend, or mounting by the solder under 180 μ m, verify the performance, reliability, etc. thoroughly.

For High Density Mounting

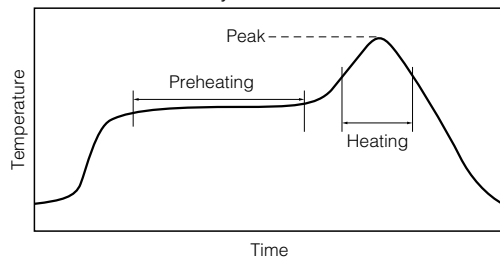


Recommended Soldering Conditions

Recommendations and precautions are described below.

Recommended soldering conditions for reflow

- Reflow soldering shall be performed a maximum of two times.
- Please contact us for additional information when used in conditions other than those specified.
- Please measure the temperature of the terminals and study every kind of solder and printed circuit board for solderability before actual use.



For soldering (Example : Sn-37Pb)

	Temperature	Time
Preheating	140 °C to 160 °C	60 s to 120 s
Main heating	Above 200 °C	30 s to 40 s
Peak	235 \pm 10 °C	max. 10 s

For lead-free soldering (Example : Sn/3Ag/0.5Cu)

	Temperature	Time
Preheating	150 °C to 170 °C	60 s to 120 s
Main heating	Above 230 °C	30 s to 40 s
Peak	max. 260 °C	max. 10 s

Flow soldering

- Chip EMI Filters cannot be mounted on a printed circuit board by flow soldering. Mount them by reflow soldering.

<Repair with hand soldering>

- Preheat with a blast of hot air or similar method. Use a soldering iron with a tip temperature of 350 °C or less. Solder each electrode for 3 seconds or less.
- Never touch this product with the tip of a soldering iron.

Safety Precautions

The following are precautions for individual products. Please also refer to the common precautions shown on page 4 of this catalog.

- Use rosin-based flux or halogen-free flux.
- For cleaning, use an alcohol-based cleaning agent. Before using any other type, consult with our sales person in advance.
- Do not apply shock to Chip EMI Filters (hereafter called the filters) or pinch them with a hard tool (e.g. pliers and tweezers). Otherwise, their bodies may be chipped, affecting their performance. Excessive mechanical stress may damage the filters. Handle with care.
- Avoid applying static electricity to the filters.
- The performance of the filters deteriorates in a circuit that is susceptible to surges or other abnormal voltages. Carefully check the circuit operations before use.
- Store the filters in a location with a temperature ranging from -5 °C to +40 °C and a relative humidity of 40 % to 60 %, where there are no rapid changes in temperature or humidity.
- Use the filters within a year after the date of the outgoing inspection indicated on the packages.

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00 Sep. 2010