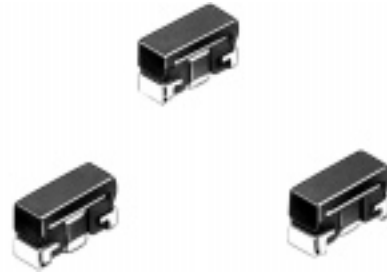


Chip EMI Filters

Type: **EXCCET**



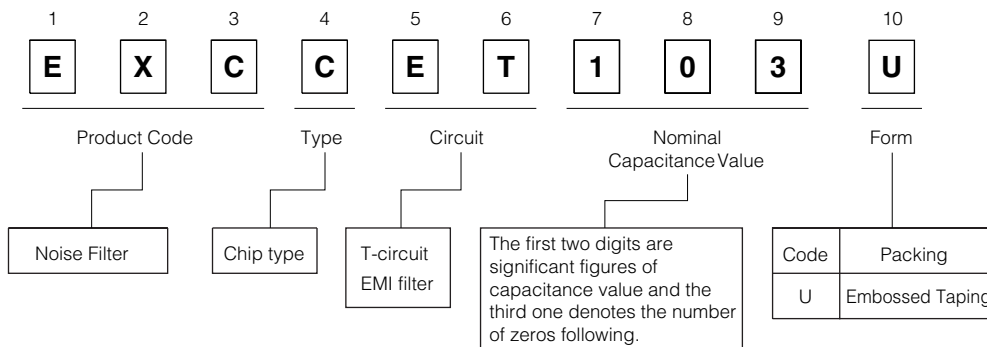
■ Features

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

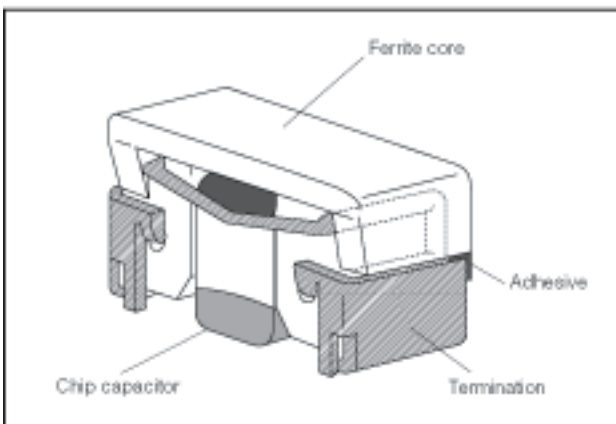
■ Recommended Applications

- Digital equipment such as Personal computers, Word processors, Printers, HDD, PPC, and Communication equipment
- Digital audio and Video equipment
- Power supply equipment such as AC adapter and Switching power supply
- Electronic automotive equipment such as Engine controls, Panels and Audio systems
- Electronic musical instrument, and other digital devices

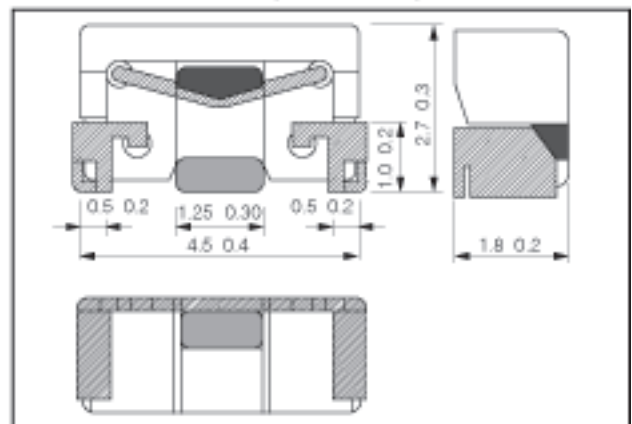
■ Explanation of Part Numbers



■ Construction



■ Dimensions in mm (not to scale)



Rev.02/04

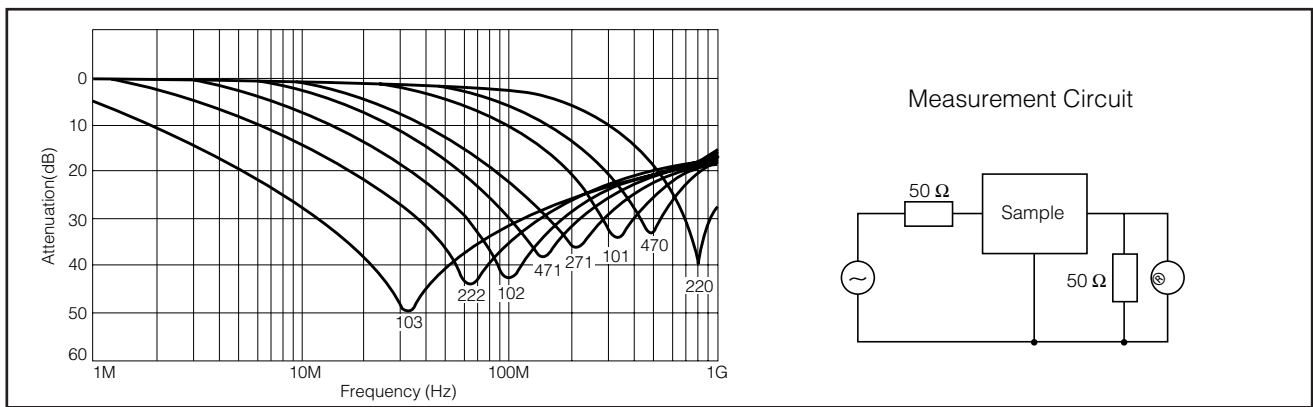
■ Ratings

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	5 to 700

(1) Please inquire about the particular capacitance value, in the 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.

■ Attenuation Characteristics (Reference Data)

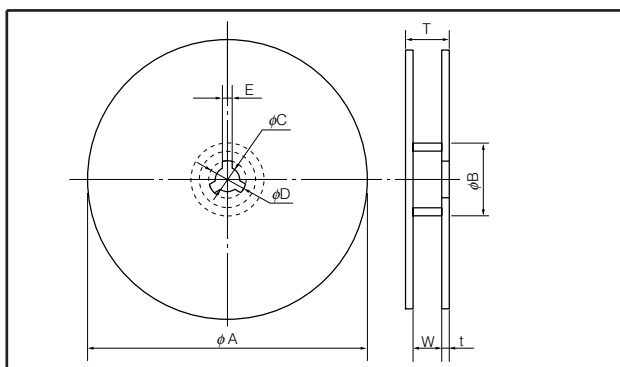


■ Packaging Specifications

● Standard Quantity

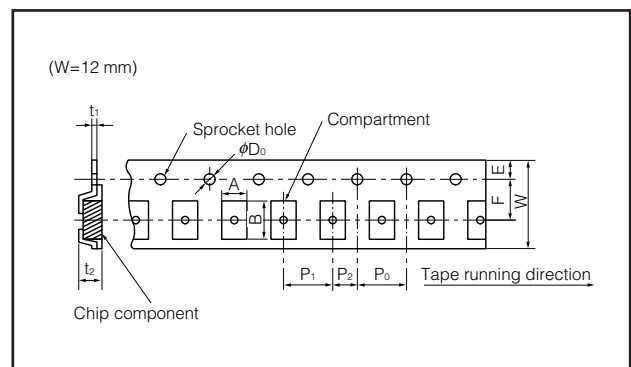
Part Number	Embossed Taping	Weight (mg/pc.) Reference Data
EXCCET□□□U	1000 pcs./reel	92.5

● Standard Reel Dimensions in mm (not to scale)



	φA	φB	φC	φD
Dimensions (mm)	180.0 ^{+0.3}	60.0±1.0	13.0±0.5	21.0±0.8
	E	W	T	t
Dimensions (mm)	2.0±0.5	13.0 ^{+0.5} _{-1.0}	16.5 max.	1.2±0.5

● Embossed Taping

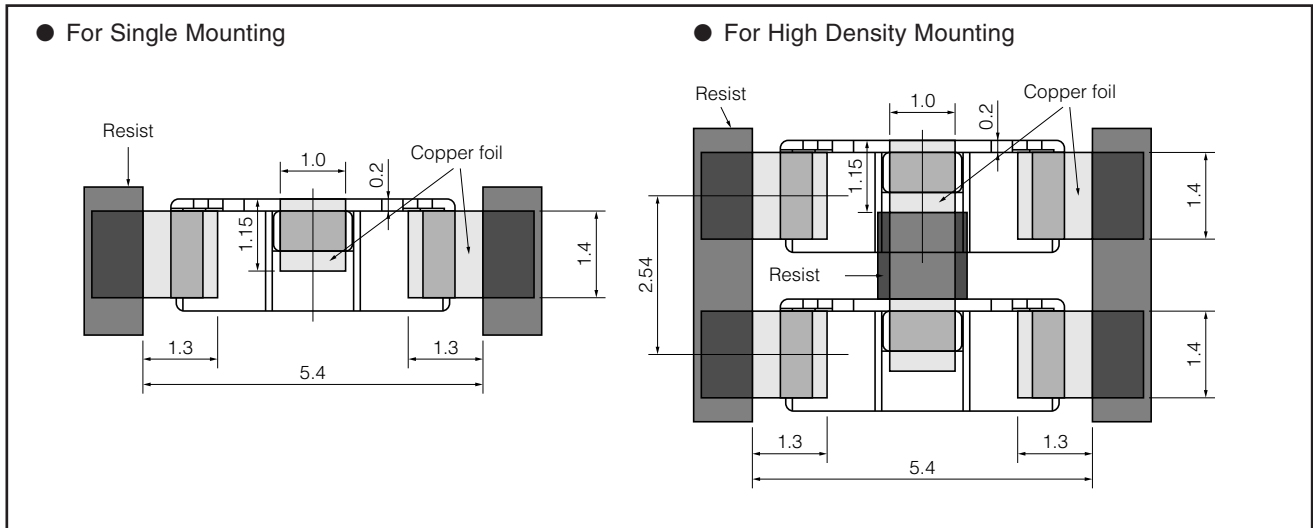


	A	B	W	F	E	P ₁
Dimensions (mm)	2.2 ^{+0.2}	4.9 ^{+0.2}	12.0 ^{+0.2}	5.50 ^{+0.05}	1.75 ^{+0.10}	4.0 ^{+0.1}
	P ₂	P ₀	φD ₀	t ₁	t ₂	
Dimensions (mm)	2.0 ^{+0.1}	4.0 ^{+0.1}	1.5 ^{+0.1}	0.35 ^{+0.05}	3.5 max.	

Design Specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use.

Whenever a doubt about safety arises from this product please inform us immediately for technical consultation without fail.

Recommended Land Pattern Dimensions in mm (not to scale)

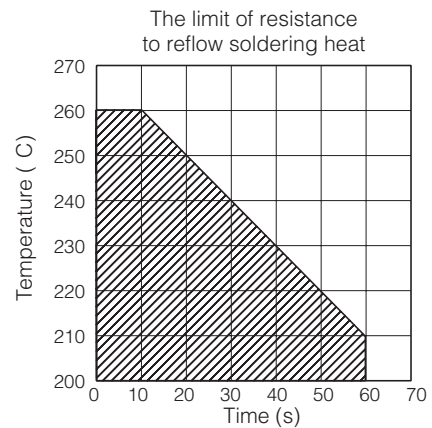
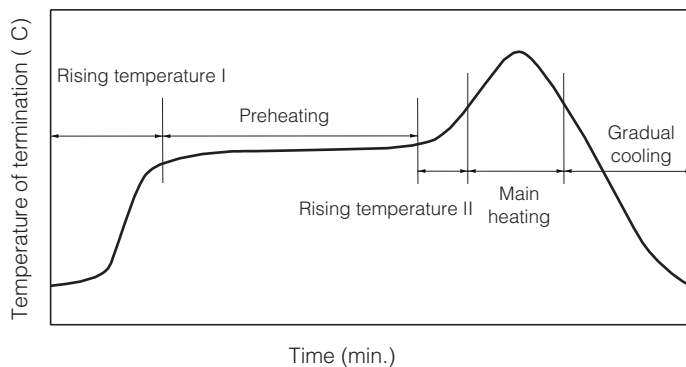


Soldering Conditions

Precautions and recommendations are described below.

- Please contact us for additional information when using in conditions other than those specified.
- Please measure a temperature of the terminals and evaluate solderability of every type of solder and printed circuit board before actual use.

<Recommended reflow soldering temperature>



Solder	Rising temperature I	Preheating	Rising temperature II	Main heating	Gradual cooling
For solder (Sn-37Pb)	The normal time for preheating 30 s to 60 s	140 C to 160 C 60 s to 120 s	Preheating to 200 C 20 s to 40 s	235 ± 10 C Peak	200 C to 100 C 1 μC to 4 C/s
For lead-free solder (Sn-3Ag-0.5Cu)	The normal time for preheating 30 s to 60 s	150 C to 170 C 60 s to 120 s	Preheating to 210 C 20 s to 40 s	250 ⁺¹⁰ / ₅ C Peak	210 C to 100 C 1 C to 4 C/s

* Reflow soldering shall be two times maximum.

<Repair with hand soldering >

- Preheat with a blast of hot air or similar method. Use a soldering iron with tip temperature of 280 °C or less. Solder for 3 seconds or less for each termination.
- Never touch this product with a tip of the soldering iron.

⚠ Safety Precautions

1. Do not use flow soldering.
2. Flux: Use rosin type or non-halogen type flux.
3. Cleaning agent: Use alcohol type. Inquire for other type of cleaning agents.
4. Excessive mechanical stress may damage the components. Handle with care.
5. Avoid application of static electricity to the filter.
6. The filter is deteriorated in the circuit where surge or other abnormal voltage is apt to occur. Study operation of the circuit.
7. Store under temperatures ranging from -5°C to $+40^{\circ}\text{C}$ and relative humidity 40% to 60%. Avoid rapid changes of temperature and humidity.
8. Use the components within one year after the date of inspection for shipment.
9. This catalog shows the quality and performance of a unit component. For quality assurance, exchange the delivery specification with us. Before adoption, be sure to evaluate and verify the product mounting it in your product.