

## Data Sheet

**Customer:**

**Product:** Multilayer Chip Beads – CBM Series

**Part No.:** CBM02YTAN471-1

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## Multilayer Chip Beads



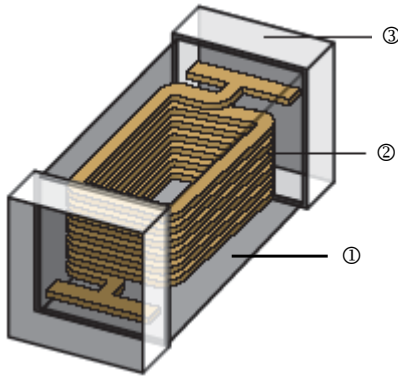
### ■ Features

- Effective EMI protection
- Low DC resistance
- High soldering heat resistance
- Multiple size availability

### ■ Applications

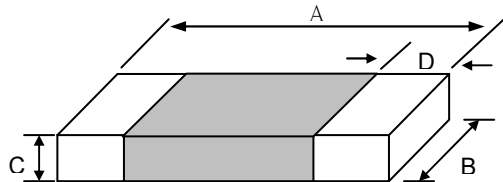
- Computers and Peripheral Equipment
- VCRS, Television, Pagers
- Cellular Phones
- Digital Communication Equipment
- Various Electronics Equipments
- Circuit Where a Stable Ground is Unavailable

### ■ Construction



① Ferrite	② Internal Electrode	③ Electrode Plating (Ag/Ni/Sn)
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### ■ Dimensions



Unit : mm

Type	Size (Inch)	A	B	C	D	Weight (g) (1000pcs)
CBM02	0402	1.0±0.10	0.50±0.10	0.5±0.10	0.1~0.35	2.6

### ■ Part Numbering

CBM	02	Y	T	A	N	471	-1
Product Type	Dimensions	Impedance Tolerance	Packaging Code	Material Code	Current	Impedance	Special Electrical Specifications
	02: 0402	Y: ±25%	T: Taping Reel	A:A material	N: General current t	471: 470Ω	

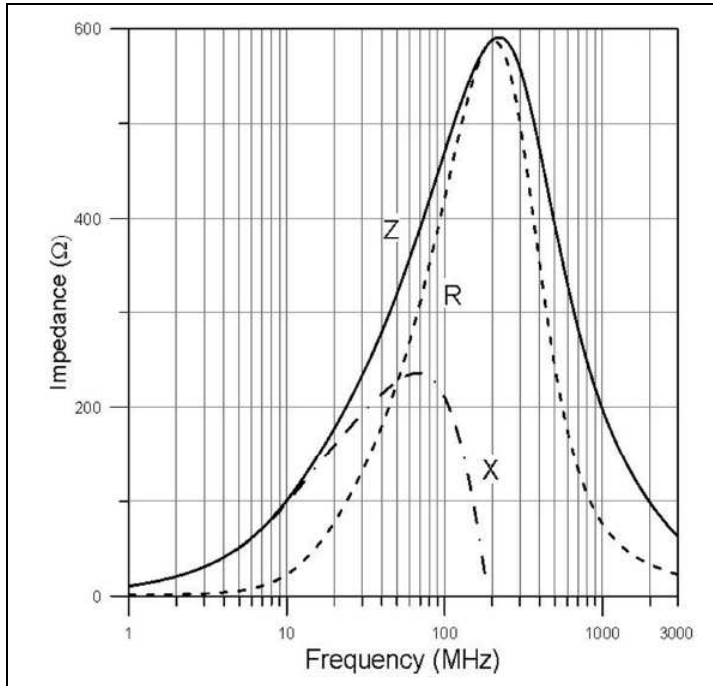
**Multilayer Chip Beads**

**Special Electrical Specifications(for General Signal Line Use)**

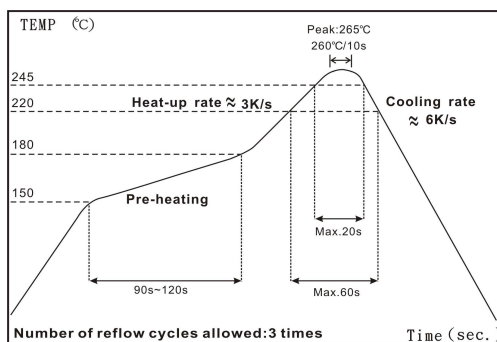
CBM02(100505) / A Material

Part No.	Impedance (Ω)	Tolerance	Test Freq. (MHz)	DCR (Ω) max.	Rated Current (mA) max.
CBM02YTAN471-1	470	±25%	100	0.60	300

**Curve**



**Soldering Condition**



IR Reflow Soldering

- (1) Time of IR reflow soldering at maximum temperature point 260°C : 10s
- (2) Time of soldering iron at maximum temperature point 280°C : 3s

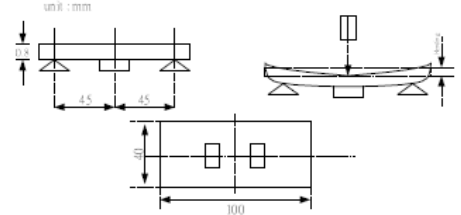

**Multilayer Chip Beads**

**■ Environmental Characteristics**

Electrical Performance Test

Item	Specification	Test Methods
Impedance	Refer to standard electrical spec.	HP4286A
DCR		HP 4338 digital mili-ohm meter

Mechanical Performance Test

Item	Specification	Test Methods
Substrate Bending Test	Without deformation cases Impedance: within±30% of initial value DC Resistance shall be satisfied	Test device shall be soldered on the substrate Substrate Dimension:100x40x0.8mm Deflection: 3.0mm Keeping Time: 10sec and then return 
Vibration	Appearance: No damage Impedance: within±30% of initial value DC Resistance shall be satisfied	Test device shall be soldered on the substrate Oscillation Frequency : 10 to 55 to 10Hz for 1min Amplitude : 1.5mm(peak-peak) Time : 2hrs for each axis (X,Y&Z), total 6hrs
Resistance to Soldering Heat	No visible damage Electrical characteristics and mechanical characteristics shall be satisfied	Solder temp: 265±5°C Immersion time: 6±1sec Preheating: 100°C to 150°C, 1 minute Measured after exposure in the room condition for 24hrs Solder: Sn-3Ag-0.5Cu
Solderability	95% min. coverage of all metallized area	Solder Temperature: 240±5°C Immersion Time: 3±1sec Solder: Sn-3Ag-0.5Cu
Terminal Strength	Without deformation cases Impedance: within±30% of initial value DC Resistance shall be satisfied	Solder chip on PCB and applied 10N (1.02KgF) for 10 sec 
Temperature Cycle	Appearance: No damage Impedance: within±30% of initial value DC Resistance shall be satisfied	One cycle: One cycle/step1: -55±3°C for 30±3min step2: standard atmospheric conditions 5s or less step3: 125±2°C for 30±3min step4: standard atmospheric conditions 5s or less Total: 100cycles Measured after exposure in the room condition for 24hrs
Humidity Resistance		Temperature: 60±2°C Relative Humidity: 90 ~ 95% Applied Current: Rated Current(maximum value) Time: 1008±12hrs Measured after exposure in the room condition for 24hrs
High Temperature Resistance		Temperature: 125±2°C Applied Current: Rated Current(maximum value) Time: 1008±12hrs Measured after exposure in the room condition for 24hrs
Low Temperature Storage Life Test		Temperature: -55±2°C Time: 1008±12hrs Measured after exposure in the room condition for 24hrs
Thermal Shock		-55°C~125°C kept stabilized for 30 minutes each for 100 cycles Measured after exposure in the room condition for 24hrs

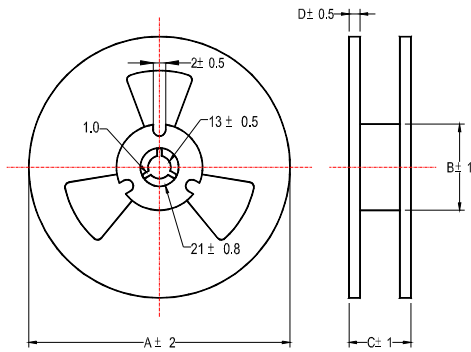
**■ Operating Temperature: -55°C ~ 125°C**

**■ Storage Temperature: 15~28°C ; Humidity < 80%RH**

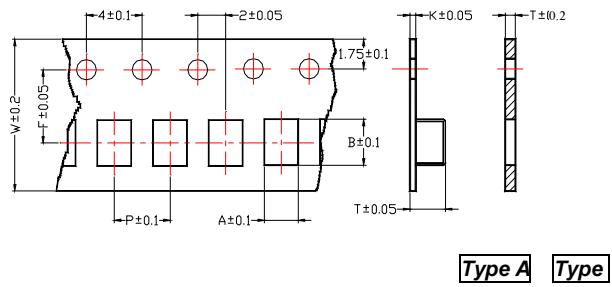
**Multilayer Chip Beads**

**■Packaging**

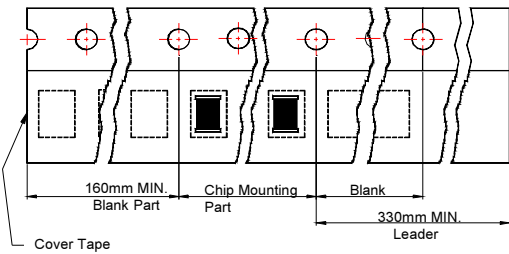
Reel Specifications



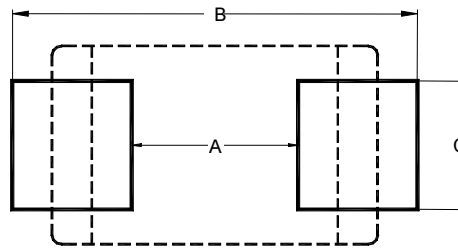
Tape Specifications



Tape Material



Recommended Pattern



Unit : mm

Type	Tape Dimensions								Reel Dimensions				Recommended Pattern			Quantity (EA)
	A	B	T	W	P	F	K	Tape Type	A	B	C	D	A	B	C	
CBM02	0.65	1.15	0.80	8.0	2.0	3.5	-	B	178	60	10	2	0.50	2.10	0.55	10000