

# Ceramic Disc Capacitors



## Mechanical

Lead Type	P/N Digits	Pitch (F)	Lead Length (L)	Packing	Lead Configuration
Lead Style : B Straight Long Lead	B20C7	7.5 ±1	20 Min.	Bulk	
	B20C7	7.5 ±1	20 Min.		
	B20C0	10 ±1	20 Min.		
	B20C0	10 ±1	20 Min.		

Available lead code (Epoxy Resin Coating) - (unit : mm)

\* Lead diameter Ød : 0.6 ±0.06

\* e (Coating extension on leads): 3mm maximum for straight lead lead style, not exceed the kink for kink lead.

## Capacitance Value vs. Rate Voltage, Product Diameter

TC		Z5U (Class II, Temperature : +10°C to +85°C, TCC : +22 to -56%)					
Rate Voltage		3 KV					
D φ (Code)	060	080	100	110	120	140	170
D Maximum (mm)	8	10	12	13	14	16	19
T Maximum (mm)	6	6	6	6	6	6	6
750	-	-	-	-	-	-	-
820	-	-	-	-	-	-	-
1,000	102	-	-	-	-	-	-
1,200	-	122	-	-	-	-	-
1,500	-	152	-	-	-	-	-
1,800	-	182	-	-	-	-	-
2,000	-	202	-	-	-	-	-
2,200	-	222	-	-	-	-	-
2,700	-	-	272	-	-	-	-
3,300	-	-	332	-	-	-	-

Capacitance Value vs. Rate Voltage,  
Product Diameter and Type

Photo: Z5U



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3,600	-	-	-	362	-	-	-
3,900	-	-	-	392	-	-	-
4,700	-	-	-	-	472	-	-
5,000	-	-	-	-	502	-	-
5,600	-	-	-	-	-	562	-
6,800	-	-	-	-	-	682	-
8,200	-	-	-	-	-	-	822
10,000	-	-	-	-	-	-	103
φ d (mm)	0.6 ±0.06						

## Specification and Test Method

- Scope : This specification applies to high voltage constant, 3 KV ceramic capacitor.
- Test Conditions : Unless otherwise specified, all tests shall be operated at the standard test conditions of temperature 5°C to 35°C and relative humidity 45% to 85%. When fails a test, retest be operated at the conditions of temperature 25°C ± 2°C, relative humidity of 60% to 70% and barometric pressure 860 to 1060 mbar.
- Handle Procedure : To avoid unexpected testing results from occurring, the tested capacitor must be kept at room temperature for at least 30 minutes and completely discharged.

## Test Items

Item	Post-Test Requirements	Testing Procedure
Appearance Structure Size	No Abnormalities	-
Withstand Voltage	Between Terminals : No Abnormalities	2 Times of The Rated Voltage Test Voltage : 6 KV DC, 1 to 5 s
Insulation Resistance	10,000MΩ Min.	Insulation Resistance Shall be Measured at 60 ±5 Seconds After Rated Voltage Applied Rated Voltage : 500 V DC
Capacitance	Tolerance : M : ±20%	Testing Frequency : 1 KHZ ±20% Testing Temperature : 25 ±2°C Testing Voltage : 1 ± 0.2 Vrms
Temperature Range	Operating Temperature : Z5U : +10°C to +85°C	
Dissipation Factor (DF)	Z5U : Below 2.5%	As Above Stipulation of Capacitance
Temperature Characteristic	Z5U : Within +22, -56%	Capacitance Shall be Measured at 25°C and Classified as Capacitance Change: Class : +10°C to +85°C
Terminal Strength	Tensile Strength : No Breakdown	Wire Diameter 0.5mm, Loading Weight 0.5 kg for 10 ±1 s Wire Diameter 0.6mm, Loading Weight 1 kg for 10 ±1 s
	Bending Strength : No Breakdown	Wire Diameter 0.5mm, Loading Weight 0.25 kg Wire Diameter 0.6mm, Loading Weight 0.5 kg (Bending Back and Forth 90° Twice)



# Ceramic Disc Capacitors



Item	Post-Test Requirements	Testing Procedure
	Appearance : No Abnormalities	Lead Wire or Terminals Shall be Immersed up to 2 mm Form Body. Into The Molten Solder of Which Temperature : 260 (+5 / -0)°C for 5 to 10 Seconds. Then Leave at Standard Test Conditions for 4 to 24 hours, Then Measured. *When Soldering Capacitor With a Soldering Iron, it Should be Performed in Following Conditions. Temperature of Iron-Tip : 350 to 400°C Soldering Iron Wattage : 50 W Max. Soldering Time : 3.5 Seconds Max.
	Capacitance Change : Z5U : ±15% Max.	
	Withstand Voltage : (Between Terminals) No Abnormalities	
Humidity Characteristic (Stable Situation)	Appearance : No Abnormalities	Capacitors Shall be Subjected to a Relative Humidity of 90 to 95% at 40 ±2°C for 500 (+24 / -0) Hours. Then Dried for 1 to 2 Hours and Measured
	Capacitance Change : Z5U : ±20% Max.	
	DF : Z5U : 5% Max.	
	Insulation Resistance : 1,000 M Ω Min.	
Humidity Loading	Appearance : No Abnormalities	Capacitors Shall be Subjected to a Relative Humidity of 90 to 95% at 40 ±2°C for 500 (+24 / -0) Hours With Rated Voltage Applied With 50 mA Maximum Then Dried for 1 to 2 Hours and Measured
	Capacitance Change : Z5U : ±20% Max.	
	DF : Z5U : 5% Max.	
	Insulation Resistance : 500 M Ω Min.	
High Temperature Loading	Appearance : No Abnormalities	Capacitors Shall be Subjected to a Test of 150% Rated Voltage With 50mA Maximum for 1,000 (+48 / -0) Hours at 85 ±2°C and Then Dried for 24 ±2 Hours and Measured
	Capacitance Change : Z5U : ±20% Max.	
	DF : Z5U : 4% Max.	
	Insulation Resistance : 1,000 M Ω Min.	
Temperature Cycling	Appearance : No Abnormalities	Capacitors Shall be Subjected to: -25 ±3°C (30 ±3 Minutes) → 25°C (3 Minutes) → 85 ±3°C (30 ±3 Minutes) → 25°C (3 Minutes) for 5 Cycle
	Capacitance Change : Z5U : ±20% Max.	
	DF : Z5U : 5% Max.	
	Insulation Resistance : 1,000 M Ω Min.	

Packaging :

Bulk : 1 K pcs / bag

## Part Number Table

Description	Part Number
Ceramic Disc Capacitor	MC202103M130B20C0B
Ceramic Disc Capacitor	MC202182M070B20C7B
Ceramic Disc Capacitor	MC202222M070B20C7B
Ceramic Disc Capacitor	MC202272M080B20C7B
Ceramic Disc Capacitor	MC202332M080B20C7B
Ceramic Disc Capacitor	MC202392M090B20C7B

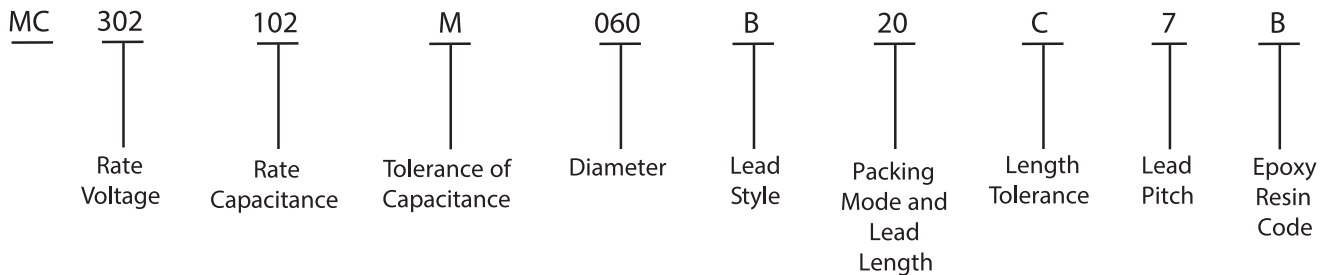
Newark.com/multicomp-pro  
Farnell.com/multicomp-pro  
Element14.com/multicomp-pro



# Ceramic Disc Capacitors

Description	Part Number
Ceramic Disc Capacitor	MC202472M090B20C7B
Ceramic Disc Capacitor	MC202682M110B20C0B
Ceramic Disc Capacitor	MC302102M060B20C7B
Ceramic Disc Capacitor	MC302103M170B20C0B
Ceramic Disc Capacitor	MC302152M080B20C7B
Ceramic Disc Capacitor	MC302182M080B20C7B
Ceramic Disc Capacitor	MC302222M080B20C7B
Ceramic Disc Capacitor	MC302272M100B20C7B
Ceramic Disc Capacitor	MC302332M100B20C7B
Ceramic Disc Capacitor	MC302392M110B20C0B
Ceramic Disc Capacitor	MC302472M120B20C0B
Ceramic Disc Capacitor	MC302682M140B20C0B
Ceramic Disc Capacitor	MC302822M170B20C0B

## Part Number Explanation



- Rated Voltage : 302 = 3 KV DC
- Rate Capacitance : 102 = 100 pF
- Tolerance of Capacitance : M = ±20%
- Diameter : 060 = 6, 070 = 7, 080 = 8, 090 = 9, 100 = 10, 120 = 12 and 130 = 13mm
- Lead Style : Refer to Mechanical
- Packing Mode and Lead Length : 20 = 20mm
- Length Tolerance : C = Min.
- Lead Pitch : 7 = 7.5 ±1mm and 0 = 10 ±1mm
- Epoxy Resin Code : B = Pb free, epoxy resin

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