

Chip Multilayer Ceramic Capacitors for General Purpose
GRM1882C1H331GA01_(0603,CH(JIS),330pF,DC 50 V)



_:Packaging Code

Reference Sheet

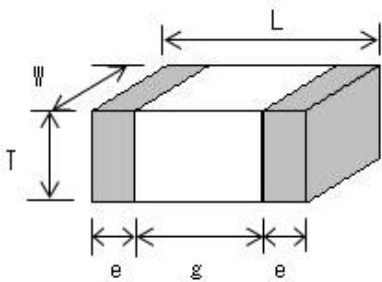
■ Scope

This product specification is applied to Chip Multilayer Ceramic Capacitors used for General Electronic equipment.

■ MURATA Part No. System

(Ex.)	GRM	18	8	2C	1H	331	G	A01	D
	(1)L/W Dimensions	(2)T Dimensions	(3)Temperature Characteristics	(4)Rated Voltage	(5)Nominal Capacitance	(6)Capacitance Tolerance	(7)Murata's Control Code	(8)Packaging Code	

■ Type



■ Rated Value

(1)Size Code : 0603
(3)Temperature Characteristics : 2C(Public STD Code :CH(JIS))

MURATA PART NO.	Dimensions(mm)					(3)Temperature Characteristics			(4)Rated Voltage	(5)Nominal Capacitance	(6)Capacitance Tolerance	Operating Temp. Range	Mounting Method
	(1)-1 L	(1)-2 W	(2) T	e	g	Temp. coeff or Cap. Change	Temp. Range	Ref.Temp.					
GRM1882C1H331GA01_	1.6 +/-0.1	0.8 +/-0.1	0.8 +/-0.1	0.2 to 0.5	0.5 min.	0+/-60 ppm/°C	20 to 125 °C	20 °C	DC 50 V	330pF	+/-2 %	-55 to 125 °C	Flow, Reflow

■ Package

(8)Code	Packaging	Packaging Unit
D	φ180mm Reel PAPER Tape W8P4	4000 pcs./Reel
J	φ330mm Reel PAPER Tape W8P4	10000 pcs./Reel

Product specifications in this catalog are as of Nov.19,2017,and are subject to change or obsolescence without notice.
Please consult the approval sheet before ordering.
Please read rating and !Cautions first.

■ Specifications and Test Methods

No.	Item		Specification	Test Method (Ref. Standard:JIS C 5101, IEC60384)														
1	Rated Voltage		Shown in Rated value.	The rated voltage is defined as the maximum voltage which may be applied continuously to the capacitor. When AC voltage is superimposed on DC voltage, V^{P-P} or V^{O-P} , whichever is larger, should be maintained within the rated voltage range.														
2	Appearance		No defects or abnormalities.	Visual inspection.														
3	Dimension		Shown in Rated value.	Using Measuring instrument of dimension.														
4	Voltage Proof		No defects or abnormalities.	Measurement Point : Between the terminations Test Voltage : 300% of the rated voltage Applied Time : 1s to 5s Charge/Discharge Current : 50mA max.														
5	Insulation Resistance(I.R.)		More than 10000MΩ	Measurement Temperature: Room Temperature Measurement Point : Between the terminations Measurement Voltage : Rated Voltage Charging Time : 2min Charge/Discharge Current : 50mA max.														
6	Capacitance		Shown in Rated value.	Measurement Temperature: Room Temperature Measurement Frequency : 1.0+/-0.1MHz Measurement Voltage : 0.5 to 5.0Vrms														
7	Q or Dissipation Factor (D.F.)		$Q \geq 1000$	Measurement Temperature : Room Temperature Measurement Frequency : 1.0+/-0.1MHz Measurement Voltage : 0.5 to 5.0Vrms														
8	Capacitance Temperature Characteristics	No bias	Nominal value of the temperature coefficient is shown in Rated value. But, the Capacitance Change under Reference Temperature is shown in Table A. Capacitance Drift:Within +/-0.2% or +/-0.05pF (Whichever is larger)	The capacitance change should be measured after 5 minutes at each specified temperature stage. Capacitance value as a reference is the value in "*" marked step. The capacitance drift is calculated by dividing the differences between the maximum and minimum measured values in the step 1,3 and 5 by the capacitance value in step 3. Measurement Voltage : Less than 1.0Vrms (Refer to the individual data sheet) <table><tr><th>Step</th><th>Temperature(°C)</th><th>Applying Voltage</th></tr><tr><td>1</td><td>Reference Temp. +/-2</td><td rowspan="5">No bias</td></tr><tr><td>2</td><td>Min. Operating Temp. +/-3</td></tr><tr><td>3 *</td><td>Reference Temp. +/-2</td></tr><tr><td>4</td><td>Max. Operating Temp. ±3</td></tr><tr><td>5</td><td>Reference Temp. +/-2</td></tr></table>	Step	Temperature(°C)	Applying Voltage	1	Reference Temp. +/-2	No bias	2	Min. Operating Temp. +/-3	3 *	Reference Temp. +/-2	4	Max. Operating Temp. ±3	5	Reference Temp. +/-2
Step	Temperature(°C)	Applying Voltage																
1	Reference Temp. +/-2	No bias																
2	Min. Operating Temp. +/-3																	
3 *	Reference Temp. +/-2																	
4	Max. Operating Temp. ±3																	
5	Reference Temp. +/-2																	

Substrate Bending Test

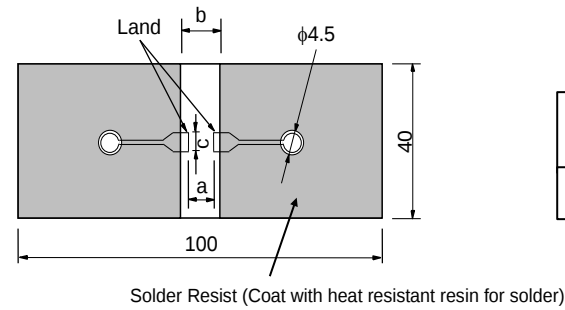
• Test Substrate

Material : JIS C 6484 Copper-clad laminated sheets for PCBs (Glass fabric base, epoxy resin)

Thickness : 1.6mm

Copper Foil Thickness: 0.035mm

Kind of Solder : Sn-3.0Ag-0.5Cu



Series	Dimension(mm)		
	a	b	c
GRM18	1.0	3.0	1.2

Fig.1 (in mm)

• Pressurization Method

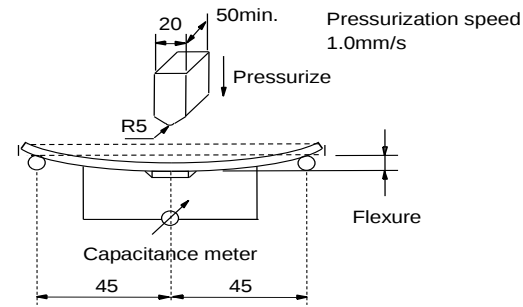


Fig.2 (in mm)

Adhesive Strength of Termination, Vibration, Temperature Sudden Change, High Temperature High Humidity(Steady), Durability

• Test Substrate

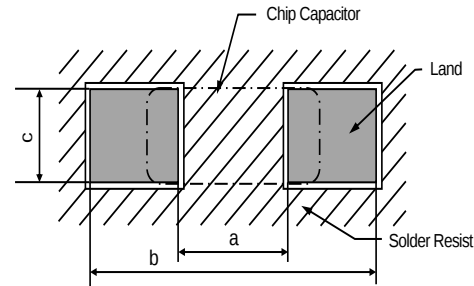
Material : JIS C 6484 Copper-clad laminated sheets for PCBs (Glass fabric base, epoxy resin)

Thickness : 1.6mm or 0.8mm

Copper Foil Thickness: 0.035mm

Kind of Solder : Sn-3.0Ag-0.5Cu

• Land Dimensions



Series	Dimension(mm)		
	a	b	c
GRM18	1.0	3.0	1.2

Fig.3

■ Package

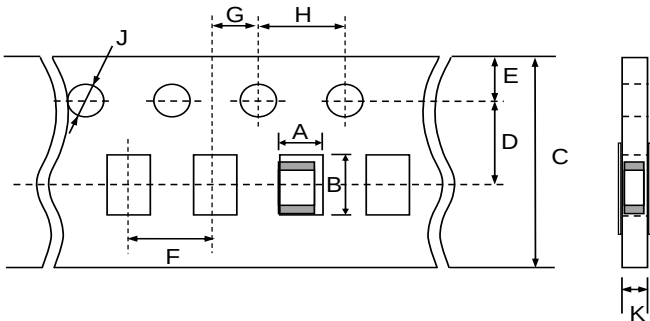
Tape Carrier Packaging

1. Minimum Quantity (pcs./reel)

Series		φ180mm Reel	φ330mm Reel
		PAPER Tape	PAPER Tape
		Code:D	Code:J
GRM18	8	4000(W8P4)	10000(W8P4)

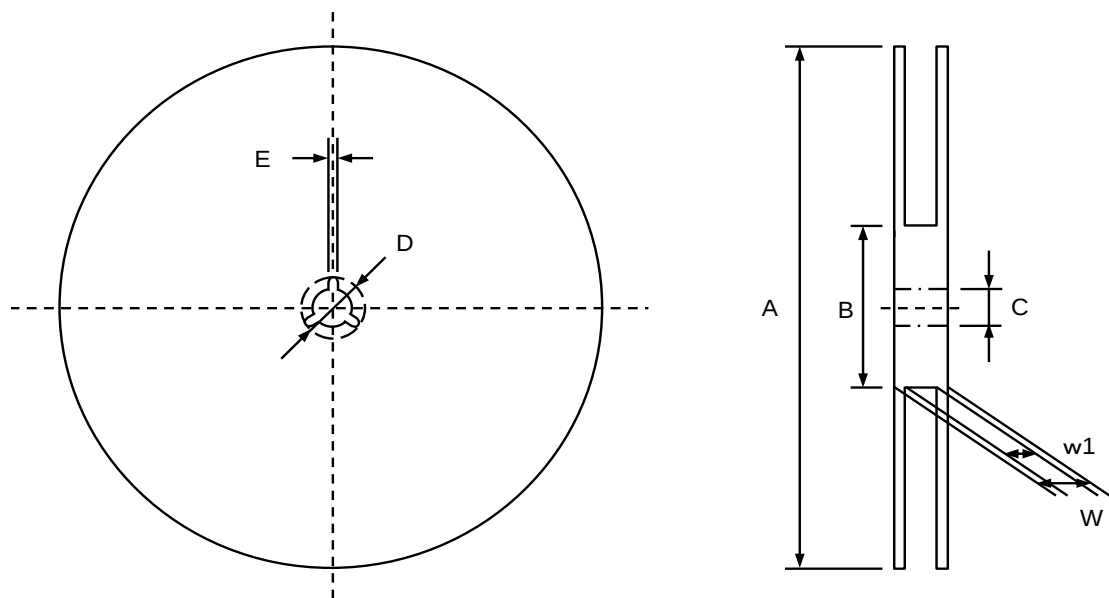
2. Dimensions of Tape (in mm)

(1)GRM188(W8P4 Code:D/J)



Series		Dimensions(Chip)			A	B	C	D	E	F	G	H	J	K	L	M
		L	W	T												
GRM18	8	1.6+/-0.1	0.8+/-0.1	0.8+/-0.1	1.05+/-0.10	1.85+/-0.10	8.0+/-0.3	3.5+/-0.05	1.75+/-0.1	4.0+/-0.1	2.0+/-0.1	4.0+/-0.1	φ1.5+0.1/-0	1.15 max.	-	-

3. Dimensions of Reel (in mm)



Reel	A	B	C	D	E	W	w1
φ180mm Reel	φ180+0/-3.0	φ50 min.	φ13+/-0.5	φ21+/-0.8	2.0+/-0.5	16.5 max.	10+/-1.5
φ330mm Reel	φ330+/-2.0	φ50 min.	φ13+/-0.5	φ21+/-0.8	2.0+/-0.5	16.5 max.	10+/-1.5

