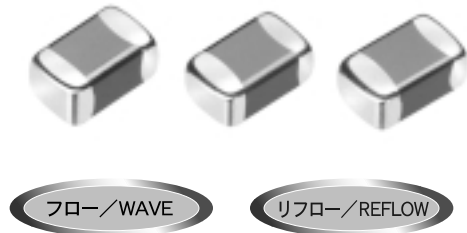


# 一般積層セラミックコンデンサ (温度補償用・Class 1) STANDARD MULTILAYER CERAMIC CAPACITORS (CLASS1 : TEMPERATURE COMPENSATING DIELECTRIC TYPE)

OPERATING TEMP. -55~+125°C



## 特長 FEATURES

- ・実装密度の向上が図れます
- ・モノリシックの構造のため、信頼性が高い
- ・同一形状、静電容量範囲が広い

- ・ Improve Higher Mounting Densities.
- ・ Multilayer block structure provides higher reliability
- ・ A wide range of capacitance values available in standard case sizes.

## 用途 APPLICATIONS

- ・ 一般電子機器用
- ・ 通信機器用 (携帯電話、PHS、コードレス電話 etc.)

- ・ General electronic equipment
- ・ Communication equipment (portable telephones, PHS, other wireless applications, etc.)

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## 形名表記法 ORDERING CODE

**1**

定格電圧 (VDC)	
E	16
T	25
U	50

**2**

シリーズ名	
M	積層コンデンサ

**3**

端子電極	
K	メッキ品

**4**

形状寸法 (EIA) L×W (mm)	
105(0402)	1.0×0.5
107(0603)	1.6×0.8
212(0805)	2.0×1.25

**5**

温度特性 (ppm/°C)	
C□	0 : CG, CH, CJ, CK
P□	-150 : PH, PJ, PK
R□	-220 : RH, RJ, RK
S□	-330 : SH, SJ, SK G ± 30
T□	-470 : TH, TJ, TK H ± 60
U□	-750 : UJ, UK J ± 120
S L	+350~-1000 K ± 250

□=許容差

**6**

公称静電容量 (pF)	
例	
0R5	0.5
010	1
100	10

※R=小数点

**7**

容量許容差	
C	± 0.25 pF
D	± 0.5 pF
F	± 1 pF
J	± 5 %
K	± 10 %

**8**

製品厚み (mm)	
Q	0.6
R	0.85
T	1.25
W	0.5
Z	0.8

**9**

個別仕様	
-	標準

**10**

包装	
B	単品(袋詰め)
F	テーピング(2mmピッチ・178φ)
T	テーピング(4mmピッチ・178φ)

**11**

当社管理記号	
△	標準品

△=スペース

U M K 1 0 5 C H 1 0 1 J W - F ○

1 2 3 4 5 6 7 8 9 10 11

**1**

Rated voltage(VDC)	
E	16
T	25
U	50

**2**

Series name	
M	Multilayer ceramic capacitor

**3**

End termination	
K	Solder plated

**4**

Dimensions (case size)(EIA) L×W (mm)	
105(0402)	1.0×0.5
107(0603)	1.6×0.8
212(0805)	2.0×1.25

**5**

Temperature characteristics(ppm/°C)	
C□	0 : CG, CH, CJ, CK
P□	-150 : PH, PJ, PK
R□	-220 : RH, RJ, RK
S□	-330 : SH, SJ, SK G ± 30
T□	-470 : TH, TJ, TK H ± 60
U□	-750 : UJ, UK J ± 120
S L	+350~-1000 K ± 250

□=Tolerance

**6**

Nominal Capacitance(pF)	
example	
0R5	0.5
010	1
100	10

\*R=decimal point

**7**

Capacitance Tolerance	
C	± 0.25 pF
D	± 0.5 pF
F	± 1 pF
J	± 5 %
K	± 10 %

**8**

Thickness[mm]	
Q	0.6
R	0.85
T	1.25
W	0.5
Z	0.8

**9**

Special code	
-	Standard Products

**10**

Packaging	
B	Bulk
F	Tape(2mm pitch・178φ)
T	Tape(4mm pitch・178φ)

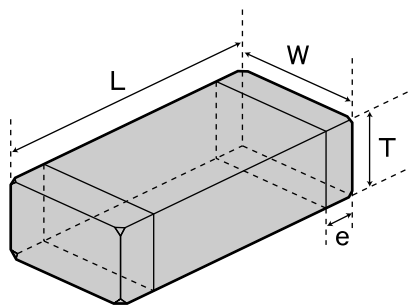
**11**

Internal code	
△	Standard Products

△=Blank space

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外形寸法 EXTERNAL DIMENSIONS



Type (EIA)	L	W	T	e
□MK105 (0402)	1.0±0.05 (0.039±0.002)	0.5±0.05 (0.020±0.002)	0.5±0.05 (0.020±0.002)	W
□MK107 (0603)	1.6±0.07 (0.063±0.003)	0.8±0.08 (0.031±0.003)	0.8±0.08 (0.031±0.003)	Z
□MK212 (0805)	2.0±0.10 (0.079±0.004)	1.25±0.1 (0.049±0.004)	0.6±0.1 (0.024±0.004)	Q
			0.85±0.1 (0.033±0.004)	R
			1.25±0.1 (0.049±0.004)	T

Unit : mm(inch)

概略バリエーション AVAILABLE CAPACITANCE RANGE

Type	105				107				212			
	R△	S△	T△	U△	C□	SL	C□	U□	SL	C□	U□	SL
WV	16V				50V	25V	50V	25V	50V			
[pF]	[pF 3digits]											
0.5												
1												
1.5												
2												
3												
4												
5												
5.6												
6												
7												
8												
9												
10												
11												
12												
13												
15												
16												
18												
20												
22												
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27												
30												
33												
36												
39												
43												
47												
51												
56												
62												
68												
75												
82												
91												
100												
110												
120												
130												
150												
160												
180												
200												
220												
240												
270												
300												
330												
360												
390												
430												
470												
510												
560												
620												
680												
750												
820												
910												
1000												
1100												
1200												
1300												
1500												
1600												
1800												
2000												
2200												
2400												
2700												
3000												

注：グラフの記号は製品の厚み記号です。  
Note: Letter code in shaded areas are thickness codes.

温度特性 Temperature Characteristics

温度特性 Temperature char.	温度係数範囲 (ppm/°C) ※1 Temperature coefficient range	使用温度範囲 Operating Temp. range
C K	0±250	-55~+125°C
C J	0±120	
C H	0±60	
C G	0±30	
P K	-150±250	
P J	-150±120	
P H	-150±60	
R K	-220±250	
R J	-220±120	
R H	-220±60	
S K	-330±250	
S J	-330±120	
S H	-330±60	
T K	-470±250	
T J	-470±120	
T H	-470±60	
U K	-750±250	
U J	-750±120	
S L	-1000~+350	

※1：20°Cにおける静電容量を基準。  
Based on the capacitance at 20°C

静電容量許容差 Capacitance Tolerance Symbol

記号 Symbol	許容差 Tolerance	区分 Item
C	±0.25pF	~5pF
D	±0.5 pF	~10pF
F	±1pF	6~10 pF
J	±5 %	11pF~
K	±10 %	11pF~

Q

Q※2 Symbol	区分 Item
≥400+20・C※1	~27pF
≥1000	30pF~

※1：C=公称静電容量 Nominal capacitance(pF)

※2：測定周波数 Measurement Frequency= 1±0.1MHz(C≤1000pF)

1±0.1kHz (C>1000pF)

測定電圧 Measurement voltage = 0.5~5Vrms(C≤1000pF)

1±0.2Vrms(C>1000pF)

## アイテム一覧 PART NUMBERS

## 105TYPE

Class 1

定格電圧 Rated Voltage (DC)	形名 Ordering code	温度特性 Temperature characteristics																公称静電 容 量 Capacitance [pF]	静電容量 許容差 Capacitance tolerance [%]	厚み Thickness [mm] (inch)		
		CK	CJ	CH	CG	PK	PJ	PH	RK	RJ	RH	SK	SJ	SH	TK	TJ	TH				UK	UJ
50V	UMK 105 CK 0R5□W	●																		0.5	±0.25pF ±0.5 pF	0.5±0.05 (0.020±0.002)
	UMK 105 CK 010□W	●																		1		
	UMK 105 CK 1R5□W	●																		1.5		
	UMK 105 CK 020□W	●																		2		
	UMK 105 CJ 030□W		●																	3		
	UMK 105 CH 040□W			●																4		
	UMK 105 CH 050□W			●																5		
	UMK 105 CH 060□W			●																6		
	UMK 105 CH 070□W			●																7		
	UMK 105 CH 080□W			●																8		
	UMK 105 CH 090□W			●																9		
	UMK 105 CH 100□W			●																10		
	UMK 105 CH 110□W			●																11		
	UMK 105 CH 120□W			●																12		
	UMK 105 CH 130□W			●																13		
	UMK 105 CH 150□W			●																15		
	UMK 105 CH 160□W			●																16		
	UMK 105 CH 180□W			●																18		
	UMK 105 CH 200□W			●																20		
	UMK 105 CH 220□W			●																22		
	UMK 105 CH 240□W			●																24		
	UMK 105 CH 270□W			●																27		
	UMK 105 CH 300□W			●																30		
	UMK 105 CH 330□W			●																33		
	UMK 105 CH 360□W			●																36		
	UMK 105 CH 390□W			●																39		
	UMK 105 CH 430□W			●																43		
	UMK 105 CH 470□W			●																47		
	UMK 105 CH 510□W			●																51		
	UMK 105 CH 560□W			●																56		
	UMK 105 CH 620□W			●																62		
	UMK 105 CH 680□W			●																68		
	UMK 105 CH 750□W			●																75		
UMK 105 CH 820□W			●																82			
UMK 105 CH 910□W			●																91			
UMK 105 CH 101□W			●																100			
UMK 105 SL 111□W																		●	110			
UMK 105 SL 121□W																		●	120			
UMK 105 SL 131□W																		●	130			
UMK 105 SL 151□W																		●	150			
UMK 105 SL 161□W																		●	160			
UMK 105 SL 181□W																		●	180			
UMK 105 SL 201□W																		●	200			
UMK 105 SL 221□W																		●	220			
UMK 105 SL 241□W																		●	240			
UMK 105 SL 271□W																		●	270			
UMK 105 CH 111□W			●																110			
UMK 105 CH 121□W			●																120			
UMK 105 CH 131□W			●																130			
UMK 105 CH 151□W			●																150			
UMK 105 CH 161□W			●																160			
UMK 105 CH 181□W			●																180			
UMK 105 CH 201□W			●																200			
UMK 105 CH 221□W			●																220			
UMK 105 SL 301□W																		●	300			
UMK 105 SL 331□W																		●	330			
25V	TMK 105 CH 131□W			●																130	± 5 ±10	
	TMK 105 CH 151□W			●																150		
	TMK 105 CH 161□W			●																160		
	TMK 105 CH 181□W			●																180		
	TMK 105 CH 201□W			●																200		
	TMK 105 CH 221□W			●																220		
	TMK 105 SL 301□W																		●	300		
TMK 105 SL 331□W																		●	330			

注：形名の□には静電容量許容差記号が入ります。  
□ Please specify the capacitance tolerance code.

## アイテム一覧 PART NUMBERS

## 105TYPE

Class 1

定格電圧 Rated Voltage (DC)	形名 Ordering code	温度特性 Temperature characteristics														公称静電容量 Capacitance [pF]	静電容量許容差 Capacitance tolerance [%]	厚み Thickness [mm] (inch)				
		CK	CJ	CH	CG	PK	PJ	PH	RK	RJ	RH	SK	SJ	SH	TK				TJ	TH	UK	UJ
16V	EMK105△ 0 R 5 B W										●			●				●		0.5	±0.1pF	0.5±0.05 (0.020±0.002)
	EMK105△ 0 1 0 B W										●			●				●		1		
	EMK105△ 1 R 1 B W										●			●				●		1.1		
	EMK105△ 1 R 2 B W										●			●				●		1.2		
	EMK105△ 1 R 3 B W										●			●				●		1.3		
	EMK105△ 1 R 5 B W										●			●				●		1.5		
	EMK105△ 1 R 6 B W										●			●				●		1.6		
	EMK105△ 1 R 8 B W										●			●				●		1.8		
	EMK105△ 0 2 0 B W										●			●				●		2		
	EMK105△ 2 R 2 J W										●			●				●		2.2		
	EMK105△ 2 R 4 J W										●			●				●		2.4		
	EMK105△ 2 R 7 J W										●			●				●		2.7		
	EMK105△ 0 3 0 J W											●		●				●		3		
	EMK105△ 3 R 3 J W											●		●				●		3.3		
	EMK105△ 3 R 6 J W											●		●				●		3.6		
	EMK105△ 3 R 9 J W											●		●				●		3.9		
	EMK105△ 4 R 3 J W												●	●				●		4.3		
	EMK105△ 4 R 7 J W													●	●			●		4.7		
	EMK105△ 5 R 1 J W													●	●			●		5.1		
	EMK105△ 5 R 6 J W										●			●	●			●		5.6		
	EMK105△ 6 R 2 J W										●			●	●			●		6.2		
	EMK105△ 6 R 8 J W										●			●	●			●		6.8		
	EMK105△ 7 R 5 J W										●			●	●			●		7.5		
	EMK105△ 8 R 2 J W										●			●	●			●		8.2		
	EMK105△ 9 R 1 J W										●			●	●			●		9.1		
	EMK105△ 1 0 0 J W										●			●	●			●		10		
	EMK105△ 1 1 0 J W										●			●	●			●		11		
	EMK105△ 1 2 0 J W										●			●	●			●		12		
	EMK105△ 1 3 0 J W										●			●	●			●		13		
	EMK105△ 1 5 0 J W										●			●	●			●		15		
	EMK105△ 1 6 0 J W										●			●	●			●		16		
	EMK105△ 1 8 0 J W										●			●	●			●		18		
EMK105△ 2 0 0 J W										●			●	●			●		20			

注：形名の△には温度特性、□には静電容量許容差記号が入ります。

△ Please specify the temperature characteristics code and □ the capacitance tolerance code.

アイテム一覧 PART NUMBERS

107TYPE

Class 1

定格電圧 Rated Voltage (DC)	形名 Ordering code	温度特性 Temperature characteristics																公称静電容量 Capacitance [pF]	静電容量許容差 Capacitance tolerance [%]	厚み Thickness [mm] (inch)			
		CK	CJ	CH	CG	PK	PJ	PH	RK	RJ	RH	SK	SJ	SH	TK	TJ	TH				UK	UJ	SL
50V	UMK 107 △ 0R5□Z	●				●			●		●			●			●		●	0.5	±0.25pF ±0.5 pF	0.8±0.08 (0.031±0.003)	
	UMK 107 △ 010□Z	●				●			●		●			●			●		●	1			
	UMK 107 △ 1R5□Z	●				●			●		●			●			●		●	1.5			
	UMK 107 △ 020□Z	●				●			●		●			●			●		●	2			
	UMK 107 △ 030□Z		●			●		●		●			●		●			●		●			3
	UMK 107 △ 040□Z			●		●		●		●			●		●			●		●			4
	UMK 107 △ 050□Z			●		●		●		●			●		●			●		●			5
	UMK 107 △ 060□Z			●		●		●		●			●		●			●		●			6
	UMK 107 △ 070□Z			●		●		●		●			●		●			●		●			7
	UMK 107 △ 080□Z			●		●		●		●			●		●			●		●			8
	UMK 107 △ 090□Z			●		●		●		●			●		●			●		●	9		
	UMK 107 △ 100□Z			●	●			●		●			●		●			●		●	10		
	UMK 107 △ 110 JZ			●	●			●		●			●		●			●		●	11		±5
	UMK 107 △ 120□Z			●	●			●		●			●		●			●		●	12		±5,±10
	UMK 107 △ 130 JZ			●	●			●		●			●		●			●		●	13		±5
	UMK 107 △ 150□Z			●	●			●		●			●		●			●		●	15		±5,±10
	UMK 107 △ 160 JZ			●	●			●		●			●		●			●		●	16		±5
	UMK 107 △ 180□Z			●	●			●		●			●		●			●		●	18		±5,±10
	UMK 107 △ 200 JZ			●	●			●		●			●		●			●		●	20		±5
	UMK 107 △ 220□Z			●	●			●		●			●		●			●		●	22		±5,±10
	UMK 107 △ 240 JZ			●	●			●		●			●		●			●		●	24		±5
	UMK 107 △ 270□Z			●	●			●		●			●		●			●		●	27		±5,±10
	UMK 107 △ 300 JZ			●	●			●		●			●		●			●		●	30		±5
	UMK 107 △ 330□Z			●	●			●		●			●		●			●		●	33		±5,±10
	UMK 107 △ 360 JZ			●	●			●		●			●		●			●		●	36		±5
	UMK 107 △ 390□Z			●	●			●		●			●		●			●		●	39		±5,±10
	UMK 107 △ 430 JZ			●	●			●		●			●		●			●		●	43		±5
	UMK 107 △ 470□Z			●	●			●		●			●		●			●		●	47		±5,±10
	UMK 107 △ 510 JZ			●	●			●		●			●		●			●		●	51		±5
	UMK 107 △ 560□Z			●	●			●		●			●		●			●		●	56		±5,±10
	UMK 107 △ 620 JZ			●	●			●		●			●		●			●		●	62		±5
	UMK 107 △ 680□Z			●	●			●		●			●		●			●		●	68		±5,±10
	UMK 107 △ 750 JZ			●	●			●		●			●		●			●		●	75		±5
	UMK 107 △ 820□Z			●	●			●		●			●		●			●		●	82		±5,±10
	UMK 107 △ 910 JZ			●	●			●		●			●		●			●		●	91		±5
	UMK 107 △ 101□Z			●	●			●		●			●		●			●		●	100		±5,±10
	UMK 107 △ 111 JZ			●	●			●		●			●		●			●		●	110		±5
	UMK 107 △ 121□Z			●	●			●		●			●		●			●		●	120		±5,±10
	UMK 107 △ 131 JZ			●	●			●		●			●		●			●		●	130		±5
	UMK 107 △ 151□Z			●	●			●		●			●		●			●		●	150		±5,±10
UMK 107 △ 161 JZ			●	●			●		●			●		●			●		●	160	±5		
UMK 107 △ 181□Z			●	●			●		●			●		●			●		●	180	±5,±10		
UMK 107 △ 201 JZ			●	●			●		●			●		●			●		●	200	±5		
UMK 107 △ 221□Z			●	●			●		●			●		●			●		●	220	±5,±10		
UMK 107 △ 241 JZ			●	●			●		●			●		●			●		●	240	±5		
UMK 107 △ 271□Z			●	●			●		●			●		●			●		●	270	±5,±10		
UMK 107 △ 301 JZ			●	●			●		●			●		●			●		●	300	±5		
UMK 107 △ 331□Z			●	●			●		●			●		●			●		●	330	±5,±10		
UMK 107 △ 361 JZ			●	●			●		●			●		●			●		●	360	±5		
UMK 107 △ 391□Z			●	●			●		●			●		●			●		●	390	±5,±10		
UMK 107 △ 431 JZ			●	●			●		●			●		●			●		●	430	±5		
UMK 107 △ 471□Z			●	●			●		●			●		●			●		●	470	±5,±10		
UMK 107 △ 511 JZ			●	●			●		●			●		●			●		●	510	±5		
UMK 107 △ 561□Z			●	●			●		●			●		●			●		●	560	±5,±10		
UMK 107 △ 621 JZ			●	●			●		●			●		●			●		●	620	±5		
UMK 107 △ 681□Z			●	●			●		●			●		●			●		●	680	±5,±10		
UMK 107 △ 751 JZ			●	●			●		●			●		●			●		●	750	±5		
UMK 107 △ 821□Z			●	●			●		●			●		●			●		●	820	±5,±10		
UMK 107 △ 911 JZ			●	●			●		●			●		●			●		●	910	±5		
UMK 107 △ 102□Z			●	●			●		●			●		●			●		●	1000	±5,±10		

注：形名の△には温度特性、□には静電容量許容差記号が入ります。

△ Please specify the temperature characteristics code and □ the capacitance tolerance code.

## アイテム一覧 PART NUMBERS

## 212TYPE

Class 1

定格電圧 Rated Voltage (DC)	形名 Ordering code	温度特性 Temperature characteristics																公称静電容量 Capacitance [pF]	静電容量許容差 Capacitance tolerance [%]	厚み Thickness [mm] (inch)		
		CK	CJ	CH	CG	PK	PJ	PH	RK	RJ	RH	SK	SJ	SH	TK	TJ	TH				UK	UJ
50V	UMK 212 △ 0R5□Q	●				●		●			●			●			●		●	0.5	±0.25pF	0.6±0.1 (0.024±0.004)
	UMK 212 △ 010□Q	●				●		●			●			●			●		●	1		
	UMK 212 △ 1R5□Q	●				●		●			●			●			●		●	1.5		
	UMK 212 △ 020□Q	●				●		●			●			●			●		●	2		
	UMK 212 △ 030□Q		●				●		●			●			●			●		3		
	UMK 212 △ 040□Q			●			●		●			●			●			●		4		
	UMK 212 △ 050□Q			●			●		●			●			●			●		5		
	UMK 212 △ 060□Q			●			●		●			●			●			●		6		
	UMK 212 △ 070□Q			●			●		●			●			●			●		7		
	UMK 212 △ 080□Q			●			●		●			●			●			●		8		
	UMK 212 △ 090□Q			●			●		●			●			●			●		9		
	UMK 212 △ 100□Q			●	●		●		●			●			●			●		10		
	UMK 212 △ 110 JQ			●	●		●		●			●			●			●		11	±5	
	UMK 212 △ 120□Q			●	●		●		●			●			●			●		12	±5, ±10	
	UMK 212 △ 130 JQ			●	●		●		●			●			●			●		13	±5	
	UMK 212 △ 150□Q			●	●		●		●			●			●			●		15	±5, ±10	
	UMK 212 △ 160 JQ			●	●		●		●			●			●			●		16	±5	
	UMK 212 △ 180□Q			●	●		●		●			●			●			●		18	±5, ±10	
	UMK 212 △ 200 JQ			●	●		●		●			●			●			●		20	±5	
	UMK 212 △ 220□Q			●	●		●		●			●			●			●		22	±5, ±10	
	UMK 212 △ 240 JQ			●	●		●		●			●			●			●		24	±5	
	UMK 212 △ 270□Q			●	●		●		●			●			●			●		27	±5, ±10	
	UMK 212 △ 300 JQ			●	●		●		●			●			●			●		30	±5	
	UMK 212 △ 330□Q			●	●		●		●			●			●			●		33	±5, ±10	
	UMK 212 △ 360 JQ			●	●		●		●			●			●			●		36	±5	
	UMK 212 △ 390□Q			●	●		●		●			●			●			●		39	±5, ±10	
	UMK 212 △ 430 JQ			●	●		●		●			●			●			●		43	±5	
	UMK 212 △ 470□Q			●	●		●		●			●			●			●		47	±5, ±10	
	UMK 212 △ 510 JQ			●	●		●		●			●			●			●		51	±5	
	UMK 212 △ 560□Q			●	●		●		●			●			●			●		56	±5, ±10	
	UMK 212 △ 620 JQ			●	●		●		●			●			●			●		62	±5	
	UMK 212 △ 680□Q			●	●		●		●			●			●			●		68	±5, ±10	
	UMK 212 △ 750 JQ			●	●		●		●			●			●			●		75	±5	
UMK 212 △ 820□Q			●	●		●		●			●			●			●		82	±5, ±10		
UMK 212 △ 910 JQ			●	●		●		●			●			●			●		91	±5		
UMK 212 △ 101□Q			●	●		●		●			●			●			●		100	±5, ±10		
UMK 212 △ 111 JQ			●	●		●		●			●			●			●		110	±5		
UMK 212 △ 121□Q			●	●		●		●			●			●			●		120	±5, ±10		
UMK 212 △ 131 JQ			●	●		●		●			●			●			●		130	±5		
UMK 212 △ 151□Q			●	●		●		●			●			●			●		150	±5, ±10		
UMK 212 △ 161 JQ			●	●		●		●			●			●			●		160	±5		
UMK 212 △ 181□Q			●	●		●		●			●			●			●		180	±5, ±10		
UMK 212 △ 201 JQ			●	●		●		●			●			●			●		200	±5		
UMK 212 △ 221□Q			●	●		●		●			●			●			●		220	±5, ±10		

注：形名の△には温度特性、□には静電容量許容差記号が入ります。

△ Please specify the temperature characteristics code and □ the capacitance tolerance code.

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Continued on next page

## アイテム一覧 PART NUMBERS

定格電圧 Rated Voltage (DC)	形名 Ordering code	温度特性 Temperature characteristics														公称静電 容 Capacitance [pF]	静電容量 許容差 Capacitance tolerance [%]	厚み Thickness [mm] (inch)				
		CK	CJ	CH	CG	PK	PJ	PH	RK	RJ	RH	SK	SJ	SH	TK				TJ	TH	UK	UJ
50V	UMK 212 △ 241 JQ			●	●			●			●			●			●	●	●	240	±5	0.6±0.1 (0.024±0.004)
	UMK 212 △ 271 □Q			●	●			●			●			●			●	●	●	270	±5, ±10	
	UMK 212 △ 301 JQ			●	●			●			●			●			●	●	●	300	±5	
	UMK 212 △ 331 □Q			●	●			●			●			●			●	●	●	330	±5, ±10	
	UMK 212 △ 361 JQ			●	●			●			●			●			●	●	●	360	±5	
	UMK 212 △ 391 □Q			●	●			●			●			●			●	●	●	390	±5, ±10	
	UMK 212 △ 431 JQ			●	●			●			●			●			●	●	●	430	±5	
	UMK 212 △ 471 □Q			●	●			●			●			●			●	●	●	470	±5, ±10	
	UMK 212 △ 511 JQ			●	●			●			●			●			●	●	●	510	±5	
	UMK 212 △ 561 □Q			●	●			●			●			●			●	●	●	560	±5, ±10	
	UMK 212 △ 621 JQ			●	●			●			●			●			●	●	●	620	±5	
	UMK 212 △ 681 □◇			●	●			●			●			●			●	●	●	680	±5, ±10	
	UMK 212 △ 751 J◇			●	●			●			●			●			●	●	●	750	±5	
	UMK 212 △ 821 □◇			●	●			●			●			●			●	●	●	820	±5, ±10	
	UMK 212 △ 911 J◇			●	●			●			●			●			●	●	●	910	±5	
	UMK 212 △ 102 □◇			●	●			●			●			●			●	●	●	1000	±5, ±10	
	UMK 212 △ 112 J◇			●	●													●	●	1100	±5	
	UMK 212 △ 122 □◇			●	●													●	●	1200	±5, ±10	
	UMK 212 △ 132 J◇			●	●													●	●	1300	±5	
	UMK 212 △ 152 □R			●	●													●	●	1500	±5, ±10	
UMK 212 △ 162 JR			●	●													●	●	1600	±5		
UMK 212 △ 182 □R			●	●													●	●	1800	±5, ±10		
UMK 212 △ 202 JR			●	●													●	●	2000	±5		
UMK 212 △ 222 □R			●	●													●	●	2200	±5, ±10		
UMK 212 △ 242 JT																	●	●	2400	±5		
UMK 212 △ 272 □T																	●	●	2700	±5, ±10		
UMK 212 △ 302JT																	●	●	3000	±5		

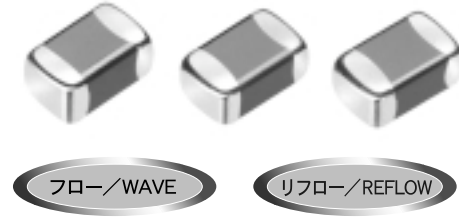
注：形名の△には温度特性、□には静電容量許容差、◇には厚み記号が入ります。

△ Please specify the temperature characteristics code and □ the capacitance tolerance code and ◇ the thickness code.

# 一般積層セラミックコンデンサ (高誘電率系・Class 2)

## STANDARD MULTILAYER CERAMIC CAPACITORS (CLASS2 :HIGH DIELECTRIC CONSTANT TYPE)

OPERATING TEMP.	B	B/BJ	-25~+85°C
		X7R	-55~+125°C
		X5R	-55~+85°C
	F	F	-25~+85°C
		Y5V	-30~+85°C



### 特長 FEATURES

- ・実装密度の向上が図れます
- ・モノリシックの構造のため、信頼性が高い
- ・同一形状、静電容量範囲が広い

- ・ Improve Higher Mounting Densities.
- ・ Multilayer block structure provides higher reliability
- ・ A wide range of capacitance values available in standard case sizes.

### 用途 APPLICATIONS

- ・一般電子機器用
- ・通信機器用（携帯電話、PHS、コードレス電話 etc.）

- ・ General electronic equipment
- ・ Communication equipment (portable telephones, PHS, other wireless applications, etc.)

### 形名表記法 ORDERING CODE

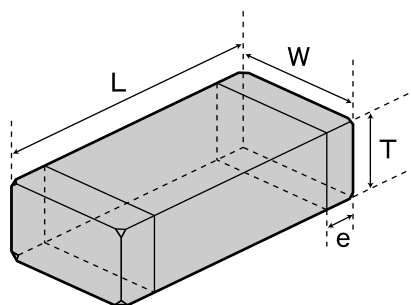
<b>1</b> 定格電圧 (VDC)	<b>4</b> 形状寸法 (EIA)L×W(mm)	<b>6</b> 公称静電容量 (pF)	<b>7</b> 容量許容差 (%)	<b>9</b> 個別仕様
J 6.3 L 10 E 16 T 25 U 50	105(0402) 1.0×0.5 107(0603) 1.6×0.8 212(0805) 2.0×1.25	例 102 1000 223 22000	K ±10 M ±20 Z ± $\frac{80}{20}$	- 標準
<b>2</b> シリーズ名	<b>5</b> 温度特性		<b>8</b> 製品厚み (mm)	<b>10</b> 包装
M 積層コンデンサ	△B, BJ ±10% △F ± $\frac{20}{80}$ % △=スペース		Q 0.6 R 0.85 S 1.15 T 1.25 V 0.5 Z 0.8	B 単品 (袋詰め) F テーピング (2mmピッチ・178φ) T テーピング (4mmピッチ・178φ)
<b>3</b> 端子電極				<b>11</b> 当社管理記号
K メッキ品				△ 標準 △=スペース

L M K 1 0 5 B J 1 0 4 K V - T ○  
1 2 3 4 5 6 7 8 9 10 11

<b>1</b> Rated voltage (VDC)	<b>4</b> Dimensions (case size) (L×W) (mm)	<b>6</b> Nominal Capacitance (pF)	<b>7</b> Capacitance Tolerance (%)	<b>9</b> Special code
J 6.3 L 10 E 16 T 25 U 50	105(0402) 1.0×0.5 107(0603) 1.6×0.8 212(0805) 2.0×1.25	example 102 1000 223 22000	K ±10 M ±20 Z ± $\frac{80}{20}$	- Standard products
<b>2</b> Series name	<b>5</b> Temperature characteristics code		<b>8</b> Thickness (mm)	<b>10</b> Packaging
M Multilayer ceramic capacitor	△B X7R -55~+125°C ±15% BJ ±15% △F Y5V -30~+85°C ± $\frac{20}{80}$ % △=Blank space		Q 0.6 R 0.85 S 1.15 T 1.25 V 0.5 Z 0.8	B Bulk F Tape&Reel (2mm pitch・178φ) T Tape&Reel (4mm pitch・178φ)
<b>3</b> End termination				<b>11</b> Internal code
K Solder plated				△ Standard Products △=Blank space



外形寸法 EXTERNAL DIMENSIONS



Type(EIA)	L	W	T		e
□MK105 (0402)	1.0±0.05 (0.039±0.002)	0.5±0.05 (0.020±0.002)	0.5±0.05 (0.020±0.002)	V	0.25±0.05 (0.010±0.002)
□MK107 (0603)	1.6±0.07 (0.063±0.003)	0.8±0.08 (0.031±0.003)	0.8±0.08 (0.031±0.003)	Z	0.35±0.25 (0.014±0.010)
□MK212 (0805)	2.0±0.1 (0.079±0.004)	1.25±0.1 (0.049±0.004)	0.6±0.1 (0.024±0.004)	Q	0.5±0.25 (0.020±0.010)
			0.85±0.1 (0.033±0.004)	R	
			1.25±0.1 (0.049±0.004)	T	

Unit : mm(inch)

概略バリエーション AVAILABLE CAPACITANCE RANGE

Type	Temp.char.	105										107				212																					
		BJ/X7R				F/Y5V						B/X7R		F/Y5V		B/X7R		F/Y5V																			
		50V	25V	16V	10V	50V	25V	16V	10V	6.3V	50V	25V	50V	25V	50V	25V	50V	25V																			
Cap [pF]	WV																																				
	[pF 3digits]																																				
220	221	[Shaded area with letter V]																																			
270	271																																				
330	331																																				
390	391																																				
470	471																																				
560	561																																				
680	681																																				
820	821																																				
1000	102																																				
1200	122																																				
1500	152																																				
1800	182																																				
2200	222																																				
2700	272																																				
3300	332																																				
3900	392																																				
4700	472																			[Shaded area with letter V]																	
5600	562																																				
6800	682																																				
8200	822																																				
10000	103																																				
12000	123																																				
15000	153																																				
18000	183																																				
22000	223																																				
27000	273																																				
33000	333																																				
39000	393																																				
47000	473																																				
56000	563																																				
68000	683																																				
82000	823																																				
100000	104																																				
150000	154																																				
220000	224																																				
330000	334																																				
470000	474																																				

注：グラフの記号は製品厚み記号です。 Note : Letter codes in shaded areas are thickness codes. \*1 Items are only available in X5R

温度特性 Temperature Characteristics			
温度特性 Temperature Characteristics	温度範囲 Operating temp. range [°C]	基準温度 Ref. Temp. [°C]	静電容量 変化率 Capacitance Change [%]
B/BJ	-25~85	20	±10
X7R	-55~125	25	±15
X5R	-55~85	25	±15
F	-25~85	20	+30 -80
F/Y5V	-30~85	25	+22 -82

静電容量許容差 Capacitance Tolerance		
記号 Code	許容差 Tolerance	区分 Item
K	±10%	B Char.
M	±20%	B Char.
Z	+80% -20%	F Char.

tan δ		
Type	tan δ ※1	区分 Item
107	≤2.5%	B Char.
212	≤5.0%	F Char.
	≤2.5%	B Char. 50V, 25V
105	≤3.5%	B Char. 16V, 0.027~0.047μF
	≤5.0%	F Char. 50V, 25V B Char. 0.056~0.1μF
	≤7.0%	F Char. 0.033μF, 0.047μF
	≤9.0%	F Char. 0.068μF~0.1μF
	≤11%	F Char. 0.22μF
	≤16%	F Char. 0.47μF

※1 測定周波数 Measurement frequency=1±0.1kHz  
測定電圧 Measurement voltage =1±0.2Vrms

## アイテム一覧 PART NUMBERS

## 105TYPE

定格電圧 Rated Voltage (DC)	形名 Ordering code	温度特性 Temp.Char	公称 静電容量 Capacitance [pF]	静電容量 許容差 Capacitance tolerance [%]	厚み Thickness (mm)(inch)
50V	UMK105 BJ221□V	BJ/X7R	220	±10 ±20	0.5±0.05 (0.020±0.002)
	UMK105 BJ271□V		270		
	UMK105 BJ331□V		330		
	UMK105 BJ391□V		390		
	UMK105 BJ471□V		470		
	UMK105 BJ561□V		560		
	UMK105 BJ681□V		680		
	UMK105 BJ821□V		820		
	UMK105 BJ102□V		1000		
	UMK105 BJ122□V		1200		
	UMK105 BJ152□V		1500		
	UMK105 BJ182□V		1800		
	UMK105 BJ222□V		2200		
	UMK105 BJ272□V		2700		
UMK105 BJ332□V	3300				
UMK105 BJ392□V	3900				
25V	TMK105 BJ472□V		4700		
	TMK105 BJ562□V		5600		
	TMK105 BJ682□V		6800		
16V	EMK105 BJ822□V		8200		
	EMK105 BJ103□V		10000		
	EMK105 BJ123□V		12000		
	EMK105 BJ153□V		15000		
	EMK105 BJ183□V		18000		
	EMK105 BJ223□V		22000		
10V	LMK105 BJ273□V		27000		
	LMK105 BJ333□V		33000		
	LMK105 BJ393□V		39000		
	LMK105 BJ473□V		47000		
	LMK105 BJ563□V*1		56000		
	LMK105 BJ683□V*1		68000		
	LMK105 BJ823□V*1		82000		
	LMK105 BJ104□V*1		100000		
50V	UMK105 F 1 0 3 Z V	F/Y5V	10000	+80 -20	0.5±0.05 (0.020±0.002)
	UMK105 F 1 5 3 Z V		15000		
25V	TMK105 F 2 2 3 Z V		22000		
16V	EMK105 F 3 3 3 Z V		33000		
	EMK105 F 4 7 3 Z V		47000		
	EMK105 F 6 8 3 Z V		68000		
	EMK105 F 1 0 4 Z V		100000		
10V	LMK105 F 2 2 4 Z V		220000		
6.3V	JMK105 F 4 7 4 Z V		470000		

形名の□には静電容量許容差記号が入ります。

□Please specify the capacitance tolerance code.

\*1 Items are only available in X5R

## アイテム一覧 PART NUMBERS

## 107TYPE

定格電圧 Rated Voltage (DC)	形名 Ordering code	温度特性 Temp.Char	公称 静電容量 Capacitance (pF)	静電容量 許容差 Capacitance tolerance [%]	厚み Thickness (mm)(inch)
50V	UMK107 B331□ Z	B /X7R	330	±10,±20	0.8±0.08 (0.031±0.003)
	UMK107 B391K Z		390	±10	
	UMK107 B471□ Z		470	±10,±20	
	UMK107 B561K Z		560	±10	
	UMK107 B681□ Z		680	±10,±20	
	UMK107 B821K Z		820	±10	
	UMK107 B102□ Z		1000	±10,±20	
	UMK107 B122K Z		1200	±10	
	UMK107 B152□ Z		1500	±10,±20	
	UMK107 B182K Z		1800	±10	
	UMK107 B222□ Z		2200	±10,±20	
	UMK107 B272K Z		2700	±10	
	UMK107 B332□ Z		3300	±10,±20	
	UMK107 B392K Z		3900	±10	
	UMK107 B472□ Z		4700	±10, ±20	
	UMK107 B562K Z		5600	±10	
	UMK107 B682□ Z		6800	±10, ±20	
UMK107 B822K Z	8200		±10		
UMK107 B103□ Z	10000		±10,±20		
25V	TMK107 B331□ Z		330	±10,±20	
	TMK107 B391K Z		390	±10	
	TMK107 B471□ Z		470	±10,±20	
	TMK107 B561K Z		560	±10	
	TMK107 B681□ Z		680	±10, ±20	
	TMK107 B821K Z		820	±10	
	TMK107 B102□ Z		1000	±10,±20	
	TMK107 B122K Z		1200	±10	
	TMK107 B152□ Z		1500	±10,±20	
	TMK107 B182K Z		1800	±10	
	TMK107 B222□ Z		2200	±10, ±20	
	TMK107 B272K Z		2700	±10	
	TMK107 B332□ Z		3300	±10,±20	
	TMK107 B392K Z		3900	±10	
	TMK107 B472□ Z	4700	±10, ±20		
	TMK107 B562K Z	5600	±10		
	TMK107 B682□ Z	6800	±10,±20		
TMK107 B822K Z	8200	±10			
TMK107 B103□ Z	10000	±10,±20			
TMK107 B123K Z	12000	±10			
TMK107 B153□ Z	15000	±10,±20			
TMK107 B183K Z	18000	±10			
TMK107 B223□ Z	22000	±10, ±20			
50V	UMK107 F152ZZ	F/Y5V	1500	+80 -20	
	UMK107 F222ZZ		2200		
	UMK107 F332ZZ		3300		
	UMK107 F472ZZ		4700		
	UMK107 F682ZZ		6800		
	UMK107 F103ZZ		10000		
	UMK107 F153ZZ		15000		
	UMK107 F223ZZ		22000		
25V	TMK107 F152ZZ		1500		
	TMK107 F222ZZ		2200		
	TMK107 F332ZZ		3300		
	TMK107 F472ZZ		4700		
	TMK107 F682ZZ		6800		
	TMK107 F103ZZ		10000		
	TMK107 F153ZZ		15000		
	TMK107 F223ZZ		22000		
	TMK107 F333ZZ	33000			
	TMK107 F473ZZ	47000			
TMK107 F683ZZ	68000				
TMK107 F104ZZ	100000				

形名の□には静電容量許容差記号が入ります。

□Please specify the capacitance tolerance code.

## アイテム一覧 PART NUMBERS

## 212TYPE

定格電圧 Rated Voltage (DC)	形名 Ordering code	温度特性 Temp.Char	公称 静電容量 Capacitance (pF)	静電容量 許容差 Capacitance tolerance [%]	厚み Thickness (mm)(inch)
50V	UMK212 B681□ Q	B/X7R	680	±10,±20	0.6±0.1 (0.024±0.004)
	UMK212 B821 K Q		820	±10	
	UMK212 B102□ Q		1000	±10,±20	
	UMK212 B122 K Q		1200	±10	
	UMK212 B152□ Q		1500	±10,±20	
	UMK212 B182 K Q		1800	±10	
	UMK212 B222□ Q		2200	±10,±20	
	UMK212 B272 K Q		2700	±10	
	UMK212 B332□ Q		3300	±10,±20	
	UMK212 B392 K Q		3900	±10	
	UMK212 B472□ Q		4700	±10,±20	
	UMK212 B562 K Q		5600	±10	
	UMK212 B682□ Q		6800	±10,±20	
	UMK212 B822 K Q		8200	±10	
	UMK212 B103□ Q		10000	±10,±20	
	UMK212 B123 K Q		12000	±10	
	UMK212 B153□ Q		15000	±10,±20	
	UMK212 B183 K Q		18000	±10	
	UMK212 B223□ Q		22000	±10,±20	
	UMK212 B273 K R		27000	±10	0.85±0.1 (0.033±0.004)
UMK212 B333□ R	33000	±10,±20			
UMK212 B393 K R	39000	±10	1.25±0.1(0.049±0.004)		
UMK212 B473□ T	47000	±10,±20			
25V	TMK212 B681□ Q	B/X7R	680	±10,±20	0.6±0.1 (0.024±0.004)
	TMK212 B821 K Q		820	±10	
	TMK212 B102□ Q		1000	±10,±20	
	TMK212 B122 K Q		1200	±10	
	TMK212 B152□ Q		1500	±10,±20	
	TMK212 B182 K Q		1800	±10	
	TMK212 B222□ Q		2200	±10,±20	
	TMK212 B272 K Q		2700	±10	
	TMK212 B332□ Q		3300	±10,±20	
	TMK212 B392 K Q		3900	±10	
	TMK212 B472□ Q		4700	±10,±20	
	TMK212 B562 K Q		5600	±10	
	TMK212 B682□ Q		6800	±10,±20	
	TMK212 B822 K Q		8200	±10	
	TMK212 B103□ Q		10000	±10,±20	
	TMK212 B123 K Q		12000	±10	
	TMK212 B153□ Q		15000	±10,±20	
	TMK212 B183 K Q		18000	±10	
	TMK212 B223□ Q		22000	±10,±20	
	TMK212 B273 K Q		27000	±10	0.85±0.1 (0.033±0.004)
TMK212 B333□ Q	33000	±10,±20			
TMK212 B393 K R	39000	±10	1.25±0.1 (0.049±0.004)		
TMK212 B473□ R	47000	±10,±20			
TMK212 B563 K R	56000	±10			
TMK212 B683□ R	68000	±10,±20			
TMK212 B823 K T	82000	±10			
TMK212 B104□ T	100000	±10,±20			
50V	UMK212 F103 Z Q	F/Y5V	10000	+80 -20	0.6±0.1 (0.024±0.004)
	UMK212 F153 Z Q		15000		
	UMK212 F223 Z Q		22000		
	UMK212 F333 Z Q		33000		
	UMK212 F473 Z Q		47000		0.85±0.1 (0.033±0.004)
	UMK212 F683 Z Q		68000		
	UMK212 F104 Z R		100000		
	UMK212 F154 Z R		150000		
UMK212 F224 Z T	220000	1.25±0.1(0.049±0.004)			
25V	TMK212 F103 Z Q	F/Y5V	10000	+80 -20	0.6±0.1 (0.024±0.004)
	TMK212 F153 Z Q		15000		
	TMK212 F223 Z Q		22000		
	TMK212 F333 Z Q		33000		
	TMK212 F473 Z Q		47000		0.85±0.1(0.033±0.004)
	TMK212 F683 Z Q		68000		
	TMK212 F104 Z Q		100000		
	TMK212 F154 Z Q		150000		
TMK212 F224 Z R	220000	1.25±0.1			
TMK212 F334 Z T	330000	0.85±0.1(0.033±0.004)			
TMK212 F474 Z T	470000		1.25±0.1 (0.049±0.004)		

形名の□には静電容量許容差記号が入ります。□Please specify the capacitance tolerance code.