

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



フロー/WAVE

リフロー/REFLOW

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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DataSheet

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	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

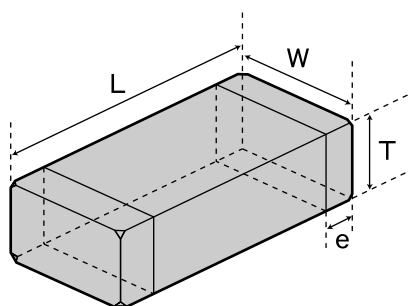
9	Special code
-	Standard Products

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

11	Internal code
△	Standard Products

△=Blank space

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) 0.85±0.1 (0.033±0.004) 1.25±0.1 (0.049±0.004)	Q R T

Unit : mm(inch)

概略バリエーション AVAILABLE CAPACITANCE RANGE

Type	Temp.char.	105	107	212
		R△ S△ T△ U△	C□ SL	C□ R△ S△ T△ U△ SL
WV		16V	50V	50V
[pF]	[pF 3digits]			
0.5	0R5			
1	010			
1.5	1R5			
2	020			
3	030			
4	040			
5	050			
5.6	5R6			
6	060			
7	070			
8	080	W		
9	090	W		
10	100	W		
11	110			
12	120			
13	130			
15	150			
16	160			
18	180			
20	200			
22	220			
24	240			
27	270			
30	300			
33	330			
36	360			
39	390			
43	430			
47	470			
51	510			
56	560			
62	620			
68	680			
75	750			
82	820			
91	910			
100	101			
110	111			
120	121			
130	131			
150	151			
160	161			
180	181			
200	201			
220	221			
240	241			
270	271			
300	301			
330	331			
360	361			
390	391			
430	431			
470	471			
510	511			
560	561			
620	621			
680	681			
750	751			
820	821			
910	911			
1000	102			
1100	112			
1200	122			
1300	132			
1500	152			
1600	162			
1800	182			
2000	202			
2200	222			
2400	242			
2700	272			
3000	302			

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	静電容量 許 容 差 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		[pF]
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	±0.5pF ±1 pF	
	UMK 105 CH 040□W			●																	4		
	UMK 105 CH 050□W			●																	5		
	UMK 105 CH 060□W			●																	6		
	UMK 105 CH 070□W			●																	7	±0.5pF ±1 pF	
	UMK 105 CH 080□W			●																	8		
	UMK 105 CH 090□W			●																	9		
	UMK 105 CH 100□W			●																	10		
	UMK 105 CH 110□W			●																	11	± 5 ±10	
	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			
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 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		
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	±5%	
	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.

4

CAPACITORS

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		±0.5pF ±1 pF
	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		±5
	UMK 107 △ 100□Z				●	●			●			●			●			●		●		●	10		
	UMK 107 △ 110 JZ				●	●			●			●			●			●		●		●	11		
	UMK 107 △ 120□Z				●	●			●			●			●			●		●		●	12		
	UMK 107 △ 130 JZ				●	●			●			●			●			●		●		●	13		
	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	SL
50V	UMK 212 △ 0R5□Q		●				●			●			●			●			●	●	0.5	±0.25pF ±0.5 pF	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
	UMK 212 △ 120□Q				●	●			●			●			●			●			●	●		12
	UMK 212 △ 130 JQ				●	●			●			●			●			●			●	●		13
	UMK 212 △ 150□Q				●	●			●			●			●			●			●	●		15
	UMK 212 △ 160 JQ				●	●			●			●			●			●			●	●		16
	UMK 212 △ 180□Q				●	●			●			●			●			●			●	●		18
	UMK 212 △ 200 JQ				●	●			●			●			●			●			●	●		20
	UMK 212 △ 220□Q				●	●			●			●			●			●			●	●		22
	UMK 212 △ 240 JQ				●	●			●			●			●			●			●	●		24
	UMK 212 △ 270□Q				●	●			●			●			●			●			●	●		27
	UMK 212 △ 300 JQ				●	●			●			●			●			●			●	●		30
	UMK 212 △ 330□Q				●	●			●			●			●			●			●	●		33
	UMK 212 △ 360 JQ				●	●			●			●			●			●			●	●		36
	UMK 212 △ 390□Q				●	●			●			●			●			●			●	●		39
	UMK 212 △ 430 JQ				●	●			●			●			●			●			●	●		43
	UMK 212 △ 470□Q				●	●			●			●			●			●			●	●		47
	UMK 212 △ 510 JQ				●	●			●			●			●			●			●	●		51
	UMK 212 △ 560□Q				●	●			●			●			●			●			●	●		56
	UMK 212 △ 620 JQ				●	●			●			●			●			●			●	●		62
	UMK 212 △ 680□Q				●	●			●			●			●			●			●	●		68
	UMK 212 △ 750 JQ				●	●			●			●			●			●			●	●		75
UMK 212 △ 820□Q				●	●			●			●			●			●			●	●	82		
UMK 212 △ 910 JQ				●	●			●			●			●			●			●	●	91		
UMK 212 △ 101□Q				●	●			●			●			●			●			●	●	100		
UMK 212 △ 111 JQ				●	●			●			●			●			●			●	●	110		
UMK 212 △ 121□Q				●	●			●			●			●			●			●	●	120		
UMK 212 △ 131 JQ				●	●			●			●			●			●			●	●	130		
UMK 212 △ 151□Q				●	●			●			●			●			●			●	●	150		
UMK 212 △ 161 JQ				●	●			●			●			●			●			●	●	160		
UMK 212 △ 181□Q				●	●			●			●			●			●			●	●	180		
UMK 212 △ 201 JQ				●	●			●			●			●			●			●	●	200		
UMK 212 △ 221□Q				●	●			●			●			●			●			●	●	220		

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.

次ページへ続く
Continued on next page

4

CAPACITORS

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 量 Capacitance	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		[pF]
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	

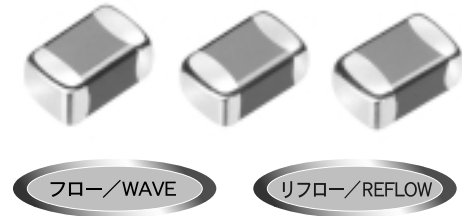
注：形名の△には温度特性、□には静電容量許容差、◇には厚み記号が入ります。

△ 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℃
		X7R	-55~ + 125℃
		X5R	-55~ + 85℃
	F	F	-25~+85℃
		Y5V	-30~ + 85℃



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

1

定格電圧 (VDC)

J	6.3
L	10
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

△B,BJ	±10%
△F	± $\frac{30}{80}$ %

△=スペース

6

公称静電容量 (pF)

例	
102	1000
223	22000

7

容量許容差 (%)

K	± 10
M	± 20
Z	± $\frac{80}{20}$

8

製品厚み (mm)

Q	0.6
R	0.85
S	1.15
T	1.25
V	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
---	----

△=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

1

Rated voltage[VDC]

J	6.3
L	10
E	16
T	25
U	50

2

Series name

M	Multilayer ceramic capacitor
---	------------------------------

3

End termination

K	Solder plated
---	---------------

4

Dimensions (case size)(L×W)(mm)

105(0402)	1.0×0.5
107(0603)	1.6×0.8
212(0805)	2.0×1.25

5

Temperature characteristics code

△B	X7R	-55~+125℃
BJ		±15%
△F	Y5V	-30~+85℃
		± $\frac{22}{82}\%$

△=Blank space

6

Nominal Capacitance[pF]

example	
102	1000
223	22000

7

Capacitance Tolerance[%]

K	± 10
M	± 20
Z	± $\frac{80}{20}$

8

Thickness[mm]

Q	0.6
R	0.85
S	1.15
T	1.25
V	0.5
Z	0.8

9

Special code

—	Standard products
---	-------------------

10

Packaging

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

11

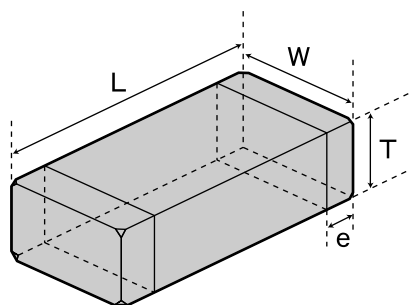
Internal code

△	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)	V
□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±0.1 (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)

4

CAPACITORS

概略バリエーション AVAILABLE CAPACITANCE RANGE

Type		105									107				212			
Temp.char.		BJ/X7R				F/Y5V					B/X7R		F/Y5V		B/X7R		F/Y5V	
WV		50V	25V	16V	10V	50V	25V	16V	10V	6.3V	50V	25V	50V	25V	50V	25V	50V	25V
Cap [pF]	[pF 3digits]																	
220	221	V									Z	Z						
270	271																	
330	331																	
390	391																	
470	471																	
560	561																	
680	681																	
820	821																	
1000	102																	
1200	122																	
1500	152	Z	Z									Z	Z	Q	Q			
1800	182																	
2200	222																	
2700	272																	
3300	332																	
3900	392																	
4700	472																	
5600	562																	
6800	682																	
8200	822																	
10000	103	V														Q	Q	
12000	123																	
15000	153																	
18000	183																	
22000	223																	
27000	273																	
33000	333																	
39000	393																	
47000	473																	
56000	563																	
68000	683	V																
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.
105	≤2.5%	B Char. 50V, 25V
	≤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		F/Y5V	8200	+80 -20	0.5±0.05 (0.020±0.002)
	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 F103ZV			10000	+80 -20	0.5±0.05 (0.020±0.002)
	UMK105 F153ZV			15000		
25V	TMK105 F223ZV			22000		
16V	EMK105 F333ZV			33000		
	EMK105 F473ZV			47000		
	EMK105 F683ZV			68000		
	EMK105 F104ZV			100000		
10V	LMK105 F224ZV			220000		
6.3V	JMK105 F474ZV			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	
25V	UMK107 B103□ Z			10000	±10,±20	
	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 F152Z Z		F/Y5V	1500	+80 -20	
	UMK107 F222Z Z			2200		
	UMK107 F332Z Z			3300		
	UMK107 F472Z Z			4700		
	UMK107 F682Z Z			6800		
	UMK107 F103Z Z			10000		
	UMK107 F153Z Z			15000		
25V	UMK107 F223Z Z			22000		
	TMK107 F152Z Z			1500		
	TMK107 F222Z Z			2200		
	TMK107 F332Z Z			3300		
	TMK107 F472Z Z			4700		
	TMK107 F682Z Z			6800		
	TMK107 F103Z Z			10000		
	TMK107 F153Z Z			15000		
	TMK107 F223Z Z			22000		
	TMK107 F333Z Z			33000		
	TMK107 F473Z Z			47000		
	TMK107 F683Z Z			68000		
	TMK107 F104Z Z			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.

4

CAPACITORS

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	0.85±0.1 (0.033±0.004)
	TMK212 B683□ R			68000	±10,±20	
	TMK212 B823 K T			82000	±10	1.25±0.1 (0.049±0.004)
	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		
	UMK212 F683 Z Q			68000		
	UMK212 F104 Z R			100000		0.85±0.1 (0.033±0.004)
	UMK212 F154 Z R			150000		
	UMK212 F224 Z T			220000		1.25±0.1(0.049±0.004)
	TMK212 F103 Z Q			10000		
	TMK212 F153 Z Q			15000		0.6±0.1 (0.024±0.004)
	TMK212 F223 Z Q			22000		
	TMK212 F333 Z Q			33000		
	TMK212 F473 Z Q			47000		
	TMK212 F683 Z Q			68000		
	TMK212 F104 Z Q			100000		
	TMK212 F154 Z Q			150000		
	TMK212 F224 Z R			220000		0.85±0.1(0.033±0.004)
	TMK212 F334 Z T			330000		
	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.