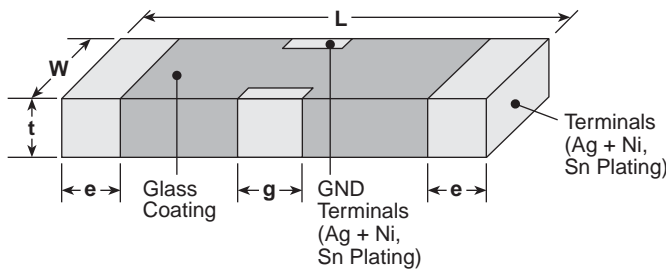


**features**

- Surface mount type noise filter
- Plated terminals provide excellent solder resistance
- Small size and high rated DC current
- 0603-2A, 0805-2A, 1206-2A series is available in signal lines in addition to power line
- Marking: Black body color with no marking
- Products with lead-free terminations meet EU RoHS requirements

**dimensions and construction**



Size	L	W	t	g	e
<b>0603</b>	.063±.008 (1.6±0.2)	.031±.008 (0.8±0.2)	.024±.008 (0.6±0.2)	.020±.008 (0.5±0.2)	.008±.006 (0.2±0.15)
<b>0805</b>	.079±.008 (2.0±0.2)	.049±.008 (1.25±0.2)	.031±.008 (0.8±0.2)*	.016±.012 (0.4±0.3)	.012±.008 (0.3±0.2)
<b>1206</b>	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.031±.008 (0.8±0.2)*	.039±.012 (1.0±0.3)	.016±.012 (0.4±0.3)
<b>1812</b>	.177±.012 (4.5±0.3)	.126±.012 (3.2±0.3)	.039±.008 (1.0±0.2)	.039±.012 (1.0±0.3)	

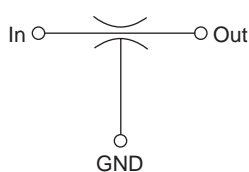
\* KGM0805 470      KGM1206CHT221/2A:  
 KGM0805 101      t = .043 ± .008 (1.1 ± 0.2)  
 KGM0805 222  
 t = .035 ± .008 (0.9 ± 0.2)

**ordering information**

New Part #	<b>KGM</b>	<b>0805</b>	<b>H</b>	<b>C</b>	<b>T</b>	<b>TE</b>	<b>220</b>	<b>2A</b>
Type				Temp. Charact.	Termination Material	Packaging	Capacitance	Rated Current
		Size	Rated Voltage	C F	T: Sn	TE: 7" embossed plastic (0603 - 4,000 pieces/reel) (0805 - 4,000 pieces/reel) (1206 - 2,000 pieces/reel) (1812 - 1,000 pieces/reel)	2 significant digits + no. of zeros	1A 2A 4A

For further information on packaging, please refer to Appendix A.

**circuit schematic**



**temperature characteristics**

Temperature Character	Temperature Range	Standard Temperature	Rate of Change (Capacitance)
C F	-25°C to +85°C	20°C	±15% -80 ~ +30%

**EMI/EMC filtering**

## applications and ratings

Part Designation	Capacitance (pF)	Capacitance Tolerance (%)	Rated Voltage DC (V)	Rated Current DC (A)	Insulation Resistance Minimum (MΩ)	Operating Temperature Range					
NEW	KGM0603ECTTE2202A	22	25	2	1000	-55°C to +125°C					
	KGM0603ECTTE4702A	47									
	KGM0603ECTTE1012A	100									
	KGM0603ECTTE2212A	220									
	KGM0603ECTTE4712A	470									
	KGM0603ECTTE1022A	1000									
	KGM0603ECTTE2222A	2200									
	KGM0603CCTTE3322A	3300									
	KGM0603CFTTE2232A	22,000									
KGM0603CFTTE1042A	100,000	16	25	2	1000	-55°C to +125°C					
NEW	KGM0805HCTTE2202A	22									
	KGM0805HCTTE4702A	47									
	KGM0805HCTTE1012A	100									
	KGM0805ECTTE2212A	220									
	KGM0805ECTTE4712A	470									
	KGM0805ECTTE1022A	1000									
	KGM0805ECTTE2222A	2200									
	KGM0805ECTTE3322A	3300									
	KGM0805EFTTE1032A	10,000									
KGM0805EFTTE2232A	22,000	16	4	1000	-55°C to +125°C						
NEW	KGM0805EFTTE1042A					100,000					
	KGM0805ECTTE2224A					2,000					
	KGM0805CFTTE1044A					100,000					
	NEW					KGM1206ECTTE2201A	22	25	1	1000	-55°C to +125°C
						KGM1206ECTTE4701A	47				
						KGM1206ECTTE1011A	100				
						KGM1206ECTTE2211A	220				
						KGM1206ECTTE4711A	470				
		KGM1206ECTTE1021A	1000								
KGM1206ECTTE2221A		2200									
KGM1206CCTTE3321A		3300									
KGM1206HCTTE2202A		22	50	2	1000	-55°C to +125°C					
NEW	KGM1206HCTTE4702A	47									
	KGM1206HCTTE1012A	100									
	KGM1206HCTTE2212A	220									
	KGM1206HCTTE4712A	470									
	KGM1206HCTTE1022A	1000									
	KGM1206VCTTE2222A	2200									
	KGM1206ECTTE2722A	2700									
	KGM1206ECTTE3322A	3300									
	KGM1206ECTTE1032A	10,000									
KGM1206EFTTE1042A	100,000	25	4	1000	-55°C to +125°C						
NEW	KGM1812HCTTE4714A					470					
	KGM1812HCTTE1024A					1000					
	KGM1812HCTTE2224A					2200					
	KGM1812ECTTE6824A					6800					

## environmental applications

### Performance Characteristics

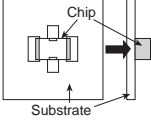
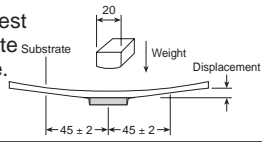
Parameter	Requirement	Test Method
Insulation Resistance	1000 MΩ Minimum	Applied rated voltage for 60 seconds
Capacitance	Within the tolerance	Frequency: 1kHz Voltage: 1Vrms
DC Resistance	60 MΩ Maximum	DC: 0.3V Maximum
Dielectric Withstanding Strength	No breakdown	Applied 250% of the rated voltage for 1 second to 5 seconds, limit surge current 50mA maximum

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

6/27/07

**environmental applications** (continued)

**Performance Characteristics**

Parameter	Requirement	Test Method															
Terminal Adhesion Strength	No physical damage	Solder a chip to a test substrate and then laterally apply a load (5N, 500gF) in the arrow direction 															
Resistance to Solder Heat	Appearance: No physical damage Capacitance: Within tolerance Dielectric Loss: Within tolerance Insulation Resistance: Within tolerance	Flux: 25% rosin Preheating: 60 seconds Preheating Temperature: 150°C Solder: H60A Solder Temperature: 260°C ±5°C Dip Time: 5 seconds ± 0.5 second															
Solderability	More than 95% of the terminal electrode shall be covered with new solder	Flux: 25% rosin Preheating: 60 seconds Preheating Temperature: 150°C Solder: H60A Solder Temperature: 230°C ±5°C Dip Time: 4 seconds ± 1 second															
Temperature Cycle*	Appearance: No physical damage Capacitance: Within tolerance Dielectric Loss: Within tolerance Insulation Resistance: Within tolerance	Repeat the following heat cycle 10 times: <table border="1" style="margin-left: 20px;"> <tr> <td>Step:</td> <td>Temperature:</td> <td>Time:</td> </tr> <tr> <td>1</td> <td>-40°C ± 3°C</td> <td>30 minutes ± 3 minutes</td> </tr> <tr> <td>2</td> <td>Room Temp.</td> <td>15 minutes maximum</td> </tr> <tr> <td>3</td> <td>85°C ± 2°C</td> <td>30 minutes ± 3 minutes</td> </tr> <tr> <td>4</td> <td>Room Temp.</td> <td>15 minutes maximum</td> </tr> </table>	Step:	Temperature:	Time:	1	-40°C ± 3°C	30 minutes ± 3 minutes	2	Room Temp.	15 minutes maximum	3	85°C ± 2°C	30 minutes ± 3 minutes	4	Room Temp.	15 minutes maximum
Step:	Temperature:	Time:															
1	-40°C ± 3°C	30 minutes ± 3 minutes															
2	Room Temp.	15 minutes maximum															
3	85°C ± 2°C	30 minutes ± 3 minutes															
4	Room Temp.	15 minutes maximum															
High Temperature Resistance*	Appearance: No physical damage Capacitance: Within tolerance Dielectric Loss: Within tolerance Insulation Resistance: Within tolerance	Temperature: 70°C ± 2°C Bias: 150% of rated voltage Test Time: 1000 +48/-0 hours															
Humidity Resistance (Unload)*	Appearance: No physical damage Capacitance: Within tolerance Dielectric Loss: Within tolerance Insulation Resistance: Within tolerance	Temperature: 85°C ± 2°C Humidity: 85% ± 5% Test Time: 500 +24/-0 hours															
Substrate Bending Test	Appearance: No physical damage Capacitance: Within tolerance	After soldering a chip to a test substrate, bend the substrate by 1 mm and then measure. The substrate is GE4 or based on GE4. 															
Humidity Resistance (Load)*	Appearance: No physical damage Capacitance: Within tolerance Dielectric Loss: Within tolerance Insulation Resistance: Within tolerance	Temperature: 40°C ± 2°C Humidity: 90 - 95% Bias: 100% of rated voltage Test Time: 500 +24/-0 hours															
Low Temperature Resistance (Unload)*	Appearance: No physical damage Capacitance: Within tolerance Dielectric Loss: Within tolerance Insulation Resistance: Within tolerance	Temperature: -40°C ± 2°C Test Time: 1000 +48/-0 hours															
Vibration	Appearance: No physical damage Capacitance: Within tolerance Dielectric Loss: Within tolerance Insulation Resistance: Within tolerance	The frequency of applied vibration should be swept from 10 Hz to 55 Hz and return to 10 Hz. This cycle time should be about 1 minute and this cycle should be repeated. Amplitude (Total Excursion): 1.5 mm This motion shall be applied for a period of 2 hours in each of 3 mutually perpendicular axes (total of 6 hours).															

\* After temperature cycle test, high temperature resistance test, humidity resistance test or low temperature resistance test, the tested sample should be measured after having been left in temperature from 15°C to 35°C and relative humidity from 45% to 75% for 24 hours.