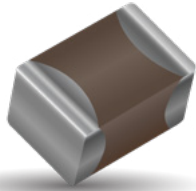


FLEXISAFE MLCC, KAS series



General Specifications and Capacitance Range For Ultra Safety Critical Applications



KYOCERA AVX have developed a range of components specifically for safety critical applications.

Utilizing the award-winning FLEXITERM™ layer in conjunction with the cascade design previously used for high voltage MLCCs, a range of ceramic capacitors is now available for customers who require components designed with an industry leading set of safety features.

The FLEXITERM™ layer protects the component from any damage to the ceramic resulting from mechanical stress during PCB assembly or use with end customers. Board flexure type mechanical damage accounts for the majority of MLCC failures. The addition of the cascade structure protects the component from low insulation resistance failure resulting from other common causes for failure; thermal stress damage, repetitive strike ESD damage and placement damage. With the inclusion of the cascade design structure to complement the FLEXITERM™ layer, the FLEXISAFE range of capacitors has unbeatable safety features. Flexisafe capacitors are qualified in accordance with AEC-Q200 standard. AEC-Q200 detailed qualification data is available on request.

HOW TO ORDER

KAS	15	A	R7	1H	103	K	T
Series	Size 15=0603 21=0805 31=1206 32=1210 43=1812 55=2220	Thickness See Cap Chart	Dielectric X7R= R7	Voltage 1C=16V 2E=250V 1E= 25V 2H=500V 1H=50V 2J=630V 2A=100V	Capacitance Code Code (in pF) 2 Significant Digits +Number of zeros eg. 10µF = 106 10nF = 103 47pF = 470	Capacitance Tolerance J* = +/- 5% K = +/- 10% M = +/- 20%	Packaging See Table Below



PACKAGING CODES

Code	EIA (inch)	IEC(mm)	7" Paper	7" Embossed	13" Paper	13" Embossed
15	0603	1608	T		M	
21	0805	2012	T	U	M	L
31	1206	3216	T	U	M	L
32	1210	3225		U		L
43	1812	3225		V		S
55	2220	3225		V		S

CAPACITANCE RANGE FLEXISAFE X7R

Soldering	0603					0805					1206					1210					1812			2220					
	Reflow/Wave					Reflow/Wave					Reflow/Wave					Reflow Only					Reflow Only			Reflow Only					
(L) Length	mm					mm					mm					mm					mm			mm					
	1.6 ± 0.15					2.01 ± 0.2					3.2 ± 0.2					3.2 ± 0.2					4.50 ± 0.30			5.70 ± 0.50					
	(0.063 ± 0.006)					(0.079 ± 0.008)					(0.126 ± 0.008)					(0.126 ± 0.008)					(0.177 ± 0.012)			(0.224 ± 0.020)					
(W) Width	mm					mm					mm					mm					mm			mm					
	0.81 ± 0.15					1.25 ± 0.2					1.6 ± 0.2					2.5 ± 0.2					3.20 ± 0.20			5.00 ± 0.40					
	(0.032 ± 0.006)					(0.049 ± 0.008)					(0.063 ± 0.008)					(0.098 ± 0.008)					(0.126 ± 0.008)			(0.197 ± 0.016)					
(t) Terminal	mm					mm					mm					mm					mm			mm					
	0.35 ± 0.15					0.5 ± 0.25					0.5 ± 0.25					0.5 ± 0.25					0.61 ± 0.36			0.64 ± 0.39					
	(0.014 ± 0.006)					(0.02 ± 0.01)					(0.02 ± 0.01)					(0.02 ± 0.01)					(0.024 ± 0.014)			(0.025 ± 0.015)					
WVDC	16V	25V	50V	100V	250V	16V	25V	50V	100V	16V	25V	50V	250V	500V	630V	1000V	16V	25V	50V	500V	630V	1000V	500V	630V	1000V	500V	630V	1000V	
102	A	A	A	A	A	B	B	B	B	B	B	B	B	G	A	A	A				H	H	H	E	E	E	C	C	C
152	A	A	A	A	A	B	B	B	B	B	B	B	B	G	A	A	A				H	H	H	F	F	F	C	C	C
182	A	A	A	A	A	B	B	B	B	B	B	B	B	G	A	A	A				H	H	H	F	F	F	C	C	C
222	A	A	A	A	A	B	B	B	B	B	B	B	B	G	A	A	A				H	J	J	F	F	F	C	C	C
332	A	A	A	A	A	B	B	B	B	B	B	B	B	G							H	J	J	F	F	F	C	C	C
472	A	A	A	A	A	B	B	B	B	B	B	B	B	G							H	L	L	F	F	F	C	C	C
562	A	A	A	A	A	B	B	B	B	B	B	B	B	G							L	L		F	J		C	C	C
682	A	A	A	A	A	B	B	B	B	B	B	B	B	G										F	J		C	C	C
103	A	A	A	A	A	B	B	B	B	B	B	B	B	G										F	J		C	C	C
123	A	A	A	A	A	B	B	B	B	B	B	B	B	G													C	C	C
153	A	A	A	A	A	B	B	B	B	B	B	B	B	G													C	C	C
183	A	A	A	A	A	B	B	B	B	B	B	B	B	G													C	C	C
223	A	A	A	A	A	K	K	K	K	B	B	B	B	G													C	C	C
273						K	K	K	K	K	B	B	B	G															
333						K	K	K	K	B	B	B	B	G															
473						K	K	K	K	N	N	N	N	G															
563						K	K	K	K	N	N	N	N																
683						K	K	K	K	N	N	N	N																
823						K	K	K	K	N	N	N	N																
104						K	K	K	K	N	N	N	N																
124										N	N	N	N																
154																		G	G	G									
224																		G	G	G									
334																		G	G	G									
474																		G	G	G									
WVDC	16V	25V	50V	100V	250V	16V	25V	50V	100V	16V	25V	50V	250V	500V	630V	1000V	16V	25V	50V	500V	630V	1000V	500V	630V	1000V	500V	630V	1000V	
SIZE	0603					0805					1206					1210					1812			2220					

Case Size	0603(KAS15)			0805(KAS21)			1206(KAS31)					1210(KAS32)					1812(KAS43)			2220(KAS55)		
Thickness Letter	A	B	K	B	N	G	A	G	H	J	L	E	F	J	C							
Max Thickness (mm)	0.90	0.94	1.40	0.94	1.27	1.78	1.8	1.78	1.80	2.21	2.80	1.80	2.21	2.80	2.80							
Carrier Tape	PAPER	PAPER	EMB	PAPER	EMB	EMB	EMB	EMB	EMB	EMB	EMB	EMB	EMB	EMB	EMB							
Packaging Code 7" reel	T	T	U	T	U	U	U	U	U	U	U	V	V	V	V							
Packaging Code 13" reel	M	M	L	M	L	L	L	L	L	L	L	S	S	S	S							
	PAPER									EMBOSSED(EMB)												

The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.