







Surface Mount Components Chart

Products	Shape	Dimensions (mm)			Available Range	Packaging						Condition			Lead-free Status A: Lead-free Products RoHS Compliant* B: Products with Lead-free Terminations RoHS Compliant*		
		L	W	T		Taping			Qty. / Bulk Case	Qty. in Bulk	Solder						
						Carrier Tape: mm					Qty. / Reel		Reflow	Flow		Wash-able	
						Material	Width	Pitch			φ180	φ330					
Multilayer Ceramic Chip Capacitors (CM Series)		CM02 (0402)	0.4	0.2	0.2	1pF to 18pF, 0.01μF	Paper	8	1 2	40,000 20,000	— 50,000	—	—	Yes	No	Yes	A
		CM03 (0603)	0.6	0.3	0.3	0.2pF to 0.22μF	Paper	8	1 2	35,000 15,000	— 50,000	—	5,000	Yes	No	Yes	
		CM05 (1005)	1.0	0.5	0.5	0.5pF to 2.2μF	Paper	8	1 2	30,000 10,000	— 50,000	50,000	1,000 to 15,000	Yes	Yes	Yes	
		CM105 (1608)	1.6	0.8	0.8	0.5pF to 10μF	Paper	8	2 4	8,000 4,000	20,000 10,000	15,000		Yes	Yes	Yes	
		CM21 (2012)	2.0	1.25	0.6	100pF to 0.1μF	Paper	8	4	4,000	10,000	—		Yes	Yes	Yes	
		CM21 (2012)	2.0	1.25	0.85	680pF to 0.47μF	Paper	8	4	4,000	10,000	—		Yes	Yes	Yes	
		CM316 (3216)		2.0	1.25	1.25	3300pF to 22μF	Plastic	8	4	3,000	10,000	5,000	Yes	Yes	Yes	
				3.2	1.6	0.85	0.1μF	Paper	8	4	4,000	10,000	—	Yes	Yes	Yes	
				3.2	1.6	1.15	0.047μF to 4.7μF	Plastic	8	4	3,000	10,000	—	Yes	Yes	Yes	
				3.2	1.6	1.6	0.1μF to 47μF	Plastic	8	4	2,500	5,000	—	Yes	Yes	Yes	
				3.2	2.5	1.4	0.1μF to 1.0μF	Plastic	8	4	3,000	10,000	—	Yes	No	Yes	
				3.2	2.5	1.6	4.7μF	Plastic	8	4	2,500	5,000	—	Yes	No	Yes	
				3.2	2.5	2.0	0.22μF to 10μF	Plastic	8	4	2,000	5,000	—	Yes	No	Yes	
				3.2	2.5	2.5	0.47μF to 100μF	Plastic	8	4	1,000	—	—	—	Yes	No	
CM43 (4532)				4.5	3.2	2.0	1.0μF	Plastic	12	8	1,000	—	—	500	Yes	No	Yes
				4.5	3.2	2.5	0.47μF to 2.2μF	Plastic	12	8	500	—	—	—	Yes	No	Yes
		4.5	3.2	2.8	100μF	Plastic	12	8	500	—	—	—	Yes	No	Yes		
Tantalum Capacitors TAJ Series		A case	3.2	1.6	1.6	0.1μF to 100μF	Plastic	8	4	2,000	—	—	—	Yes	Yes	Yes	A
		B case	3.5	2.8	1.9	0.15μF to 220μF	Plastic	8	4	2,000	—	—	—	Yes	Yes	Yes	
		C case	6.0	3.2	2.6	0.47μF to 680μF	Plastic	12	8	500	—	—	—	Yes	Yes	Yes	
		D case	7.3	4.3	2.9	1.5μF to 1500μF	Plastic	12	8	500	—	—	—	Yes	Yes	Yes	
		E case	7.3	4.3	4.1	10μF to 1500μF	Plastic	12	8	400	—	—	—	Yes	Yes	Yes	
		V case	7.3	6.1	3.45	10μF to 2200μF	Plastic	12	8	400	—	—	—	Yes	Yes	Yes	
		F case	6.0	3.2	2.0 max.	68μF to 470μF	Plastic	12	8	1,000	—	—	—	Yes	Yes	Yes	
		K case	3.2	1.6	1.0 max.	4.7μF to 33μF	Plastic	8	4	3,000	—	—	—	Yes	Yes	Yes	
		P case	2.05	1.35	1.5 max.	0.68μF to 47μF	Plastic	8	4	2,500	—	—	—	Yes	Yes	Yes	
		R case	2.05	1.3	1.2 max.	0.1μF to 22μF	Plastic	8	4	2,500	—	—	—	Yes	Yes	Yes	
		S case	3.2	1.6	1.2 max.	0.1μF to 47μF	Plastic	8	4	2,500	—	—	—	Yes	Yes	Yes	
		T case	3.5	2.8	1.2 max.	0.33μF to 150μF	Plastic	8	4	2,500	—	—	—	Yes	Yes	Yes	
		W case	6.0	3.2	1.5 max.	1μF to 330μF	Plastic	12	8	1,000	—	—	—	Yes	Yes	Yes	
		X case	7.3	4.3	1.5 max.	10μF to 330μF	Plastic	12	8	1,000	—	—	—	Yes	Yes	Yes	
Y case	7.3	4.3	2.0 max.	3.3μF to 1000μF	Plastic	12	8	1,000	—	—	—	Yes	Yes	Yes			
Niobium Oxide Capacitors NOJ Series		A case	3.2	1.6	1.6	4.7μF to 47μF	Plastic	8	4	2,000	—	—	—	Yes	Yes	Yes	A
		B case	3.5	2.8	1.9	10μF to 100μF	Plastic	8	4	2,000	—	—	—	Yes	Yes	Yes	
		C case	6.0	3.2	2.6	22μF to 330μF	Plastic	12	8	500	—	—	—	Yes	Yes	Yes	
		D case	7.3	4.3	2.9	100μF to 470μF	Plastic	12	8	500	—	—	—	Yes	Yes	Yes	
		E case	7.3	4.3	4.1	220μF to 680μF	Plastic	12	8	400	—	—	—	Yes	Yes	Yes	
		V case	7.3	6.1	3.45	470μF to 1000μF	Plastic	12	8	400	—	—	—	Yes	Yes	Yes	
		F case	6.0	3.2	2.0 max.	100μF to 220μF	Plastic	12	8	1,000	—	—	—	Yes	Yes	Yes	
		P case	2.05	1.35	1.5 max.	2.2μF to 22μF	Plastic	8	4	2,500	—	—	—	Yes	Yes	Yes	
		S case	3.2	1.6	1.2 max.	4.7μF to 22μF	Plastic	8	4	2,500	—	—	—	Yes	Yes	Yes	
		T case	3.5	2.8	1.2 max.	4.7μF to 47μF	Plastic	8	4	2,500	—	—	—	Yes	Yes	Yes	
		W case	6.0	3.2	1.5 max.	33μF to 100μF	Plastic	12	8	1,000	—	—	—	Yes	Yes	Yes	
		X case	7.3	4.3	1.5 max.	68μF to 220μF	Plastic	12	8	1,000	—	—	—	Yes	Yes	Yes	
		Y case	7.3	4.3	2.0 max.	68μF to 470μF	Plastic	12	8	1,000	—	—	—	Yes	Yes	Yes	
		EMI Filters		KNF21	2.0	1.25	0.8	25 to 400MHz	Plastic	8	4	3,000	—	—	—	Yes	
KNA16	1.6			0.8	0.5	100 to 390MHz	Paper	8	4	5,000	—	—	—	Yes	No	Yes	
KNA21	2.0			1.25	0.7	150 to 400MHz	Plastic	8	4	3,000	—	—	—	Yes	No	Yes	
KNA32	3.2			1.6	0.75	50 to 200MHz	Plastic	8	4	3,000	—	—	—	Yes	No	Yes	A
KVA16	1.6			0.8	0.5	200 to 300MHz	Paper	8	4	5,000	—	—	—	Yes	No	Yes	
KVA21	2.0			1.25	0.7	200 to 300MHz	Plastic	8	4	3,000	—	—	—	Yes	No	Yes	
KNH21	2.0			1.25	0.85	220 to 1,000,000pF	Plastic	8	4	3,000	—	—	—	Yes	No	Yes	
KNH21C106DA	2.0			1.25	1.0	10,000,000pF	Plastic	8	4	3,000	—	—	—	Yes	No	Yes	
VC0201	0.6			0.3	0.33 max.	to 5.6V	Paper	8	4	10,000	—	—	—	Yes	Yes	Yes	
VC0402, VC04LC/ AG	1.0	0.5	0.6 max.	to 18V	Paper	8	4	10,000	—	—	—	Yes	Yes	Yes			
VCH4	1.0	0.5	0.35 max.	to 15V	Paper	8	4	10,000	—	—	—	Yes	Yes	Yes			
USB0005/ 6	1.0	0.5	0.6 max.	to 18V	Paper	8	4	10,000	—	—	—	Yes	Yes	Yes			
MG042	1.0	1.37	0.66 max.	to 18V	Paper	8	4	4,000	—	—	—	Yes	Yes	Yes			
USB0002	1.0	1.37	0.66 max.	to 18V	Plastic	8	4	4,000	—	—	—	Yes	Yes	Yes			
MG052	1.25	2.01	1.02 max.	to 18V	Paper	8	4	4,000	—	—	—	Yes	Yes	Yes			
VC0603	1.6	0.8	0.9 max.	to 30V	Paper	8	4	4,000	—	—	—	Yes	Yes	Yes			
VC06LC/ AG	1.6	0.8	0.9 max.	to 18V	Paper	8	4	4,000	—	—	—	Yes	Yes	Yes			
USB0001	1.6	0.8	0.9 max.	to 18V	Paper	8	4	4,000	—	—	—	Yes	Yes	Yes			
MG064	1.6	3.2	1.22 max.	to 18V	Plastic	8	4	4,000	—	—	—	Yes	Yes	Yes			
USB0004	1.6	3.2	1.22 max.	to 18V	Plastic	8	4	2,000	—	—	—	Yes	Yes	Yes			
VC0805, VC08LC	2.01	1.25	1.02 max.	to 30V	Paper	8	4	2,000	—	—	—	Yes	Yes	Yes			
VC1206, VC12LC	3.2	1.6	1.02 max.	to 65V	Plastic	8	4	2,000 to 4,000	—	—	—	Yes	Yes	Yes			
VJ20	3.2	1.6	1.7 max.	to 85V	Plastic	8	4	3,000	—	—	—	Yes	Yes	Yes			
VC1210	3.2	2.49	1.7 max.	to 60V	Plastic	8	4	2,000	—	—	—	Yes	Yes	Yes			
VJ13	3.2	2.5	1.7 max.	to 85V	Plastic	8	4	2,000	—	—	—	Yes	Yes	Yes			
VC1812	4.5	3.2	1.7 max.	to 56V	Plastic	8	4	1,000	—	—	—	Yes	Yes	Yes			
VJ14	4.5	3.2	2.0 max.	to 125V	Plastic	8	4	1,250	—	—	—	Yes	Yes	Yes			
VJ15	5.7	5.0	2.5 max.	to 85V	Plastic	12	4	1,250	—	—	—	Yes	Yes	Yes			
VJ32	8.2	8.2	2.5 max.	to 16V	Plastic	12	4	1,000	—	—	—	Yes	Yes	Yes			

\* RoHS Compliant Products: Products which do not contain lead, cadmium, mercury, hexavalent chromium, PBB and PBDE, based on EU DIRECTIVE 2002/95/EC. Substances exempted by the DIRECTIVE and impurities observed in natural environment are excepted.