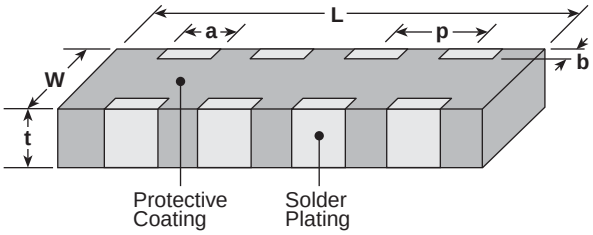
EU RoHS COMPLIANT

features

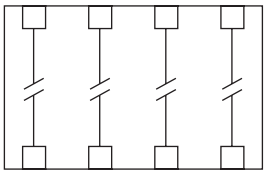
- 50% PCB savings vs. discrete components
- Placement savings by increasing mounting throughput
- Dense dielectric layers
- High volumetric efficiency
- Marking: Tan body color with no marking
- Products with lead-free terminations meet EU RoHS requirements

dimensions and construction



Type (Inch Size Code)	Dimensions inches (mm)					
	L	W	t	a	b	p
1J4 (0603)	.126±.006 (3.2±0.15)	.063±.006 (1.6±0.15)	.031±.004 (0.8±0.1)	.016±.004 (0.4±0.1)	.012±.008 (0.3±0.2)	.031±.004 (0.8±0.1)

circuit schematic



ordering information

New Part #

MCA	1J4	NPO	H	T	TD	104	J
Type	Size	Dielectric	Voltage	Termination Material	Packaging	Capacitance	Tolerance
	1J4: 0603	NPO X7R Y5V	C: 16V E: 25V H: 50V	T: Sn	TD: 7" paper tape (4,000 pieces/reel)	2 significant digits + no. of zeros "R" indicates decimal point	J: ±5% - NPO K: ±10% - X7R Z: +80, -20% - Y5V

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

environmental applications

Performance Characteristics

Parameter	Test Method
Capacitance Range	NPO: 10pF - 1nF Y5V: 10nF - 100n X7R: 16V = 10nF - 100nF 25V = 10nF - 68nF 50V = 220pF - 10nF
Tolerance on Capacitance after 1000 hours	NPO: ±5% Y5V: +80, -20% (Z) X7R: ±10%
Test Voltage (DC) for 1 minute	NPO: 2.5 x U_R X7R: 2.5 x U_R
Tanδ	NPO: ≤0.1% Y5V: ≤7% X7R: 16V = ≤3.5% 25V & 50V = ≤2.5%
Insulation Resistance after 1 minute at U_R (DC)	NPO: >10GΩ Y5V: R_{ins} x C > 100s X7R: C ≤ 10nF = R_{ins} x C ≥ 10GΩ C > 10nF = R_{ins} x C > 500s
Temperature Coefficient	NPO: (0 ± 30) x 10^{-6} /K
Resistance to Solder Heat	Y5V: 260°C for 10 seconds
Aging	X7R: Typical 1% per time decade

dielectric capacitance range

Size		NPO	X7R			Y5V
Capacitance pF	Code 15-17	1J4	1J4			1J4
		50V (H)	16V (C)	25V (E)	50V (H)	25V (E)
10	100					
12	120					
15	150					
18	180					
22	220					
27	270					
33	330					
39	390					
47	470					
56	560					
68	680					
82	820					
100	101					
120	121					
150	151					
180	181					
220	221					
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					
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					