

10V to 6kV - SM chip - Quick Reference Guide



The following table shows the minimum and maximum capacitance values in farads available for any given case size and voltage. Continuing developments in processes and materials technology mean we are often able to extend our product ranges.

Capacitance in F		0603	0805	1206	1210	1808	1812	1825	2220	2225	3640	5550	8060
10V	COG/NPO	0.47p-3.9n	1.0p-15n	1.0p-47n	3.9p-100n	15p-100n	10p-220n	10p-470n	10p-470n	10p-560n	n/a	n/a	n/a
	X7R	100p-100n	100p-330n	100p-1.0μ	1.0n-1.5μ	15p-1.5μ	3.9n-3.3μ	10n-4.7μ	10n-5.6μ	18n-6.8μ	n/a	n/a	n/a
	X5R	120n-150n	390n-680n	1.2μ-1.5μ	1.8μ-3.3μ	1.8μ-2.7μ	3.9μ-10μ	5.6μ-15μ	6.8μ-18μ	8.2μ-22μ	n/a	n/a	n/a
16V	COG/NPO	0.47p-1.5n	1.0p-6.8n	1.0p-22n	3.9p-33n	4.7p-33n	10p-100n	10p-150n	10p-150n	10p-220n	n/a	n/a	n/a
	X7R	100p-100n	100p-330n	100p-1.0μ	1.0n-1.5μ	15p-1.5μ	3.9n-3.3μ	10n-4.7μ	10n-5.6μ	18n-6.8μ	n/a	n/a	n/a
	X5R	120n	390n-470n	1.2μ	1.8μ-2.7μ	1.8μ-2.2μ	3.9μ-6.8μ	5.6μ-12μ	6.8μ-12μ	8.2μ-15μ	n/a	n/a	n/a
25V	COG/NPO	0.47p-1.0n	1.0p-4.7n	1.0p-15n	3.9p-22n	4.7p-27n	10p-68n	10p-100n	10p-100n	10p-150n	n/a	n/a	n/a
	X7R	100p-56n	100p-220n	100p-820n	1.0n-1.2μ	15p-1.2μ	3.9n-2.2μ	10n-3.9μ	10n-4.7μ	18n-5.6μ	n/a	n/a	n/a
	X5R	68n-100n	270n-390n	1.0μ	1.5μ-2.2μ	1.5μ	2.7μ-4.7μ	4.7μ-10μ	5.6μ-10μ	6.8μ-12μ	n/a	n/a	n/a
50/63V	COG/NPO	0.47p-470p	1.0p-2.7n	1.0p-10n	3.9p-18n	4.7p-18n	10p-47n	10p-68n	10p-68n	10p-100n	10p-220n	390p-390n	680p-680n
	X7R	100p-47n	100p-220n	100p-470n	1.0n-1.0μ	15p-680n	3.9n-2.2μ	10n-1.8μ	10n-3.3μ	18n-3.3μ	390p-10μ	560p-15μ	10n-22μ
	X5R	56n-68n	270n-330n	560n-680n	1.2μ-1.5μ	820n-1.0μ	2.7μ-3.3μ	2.2μ-6.8μ	3.9μ-6.8μ	3.9μ-10μ	n/a	n/a	n/a
100V	COG/NPO	0.47p-330p	1.0p-1.8n	1.0p-6.8n	3.9p-12n	4.7p-12n	10p-27n	10p-47n	10p-47n	10p-68n	10p-180n	390p-330n	680p-560n
	X7R	100p-12n	100p-56n	100p-180n	1.0n-470n	15p-390n	3.9n-1.0μ	10n-1.2μ	10n-1.8μ	18n-2.7μ	390p-5.6μ	560p-10μ	10n-15μ
200/250V	COG/NPO	0.47p-100p	1.0p-680p	1.0p-2.2n	3.9p-4.7n	4.7p-4.7n	10p-12n	10p-22n	10p-22n	10p-27n	10p-82n	390p-120n	680p-270n
	X7R	100p-5.6n	100p-33n	100p-120n	1.0n-220n	15p-220n	3.9n-560n	10n-1.0μ	10n-1.0μ	18n-1.5μ	390p-3.3μ	560p-5.6μ	10n-10μ
500V	COG/NPO	0.47p-68p	1.0p-330p	1.0p-1.5n	3.9p-3.9n	4.7p-3.3n	10p-10n	10p-15n	10p-15n	10p-22n	10p-56n	390p-100n	680p-180n
	X7R	100p-1.5n	10p-10n	10p-47n	15p-120n	15p-120n	22p-330n	180p-560n	180p-560n	180p-820n	390p-1.0μ	560p-1.8μ	10n-3.3μ
630V	COG/NPO	n/a	1.0p-180p	1.0p-1.0n	3.9p-1.8n	4.7p-2.2n	10p-5.6n	10p-8.2n	10p-10n	10p-15n	10p-39n	390p-68n	680p-150n
	X7R	n/a	10p-6.8n	10p-33n	15p-47n	15p-68n	22p-180n	180p-180n	180p-330n	180p-390n	390p-680n	560p-1.2μ	10n-2.2μ
1kV	COG/NPO	n/a	1.0p-100p	1.0p-470p	3.9p-1.0n	4.7p-1.2n	10p-3.3n	10p-4.7n	10p-8.2n	10p-10n	10p-22n	390p-39n	680p-68n
	X7R	n/a	10p-4.7n	10p-27n	15p-33n	15p-47n	22p-100n	180p-120n	180p-120n	180p-150n	390p-180n	560p-390n	10n-1.0μ
1.2kV	COG/NPO	n/a	n/a	1.0p-220p	3.9p-680p	4.7p-1.0n	10p-2.2n	10p-3.9n	10p-4.7n	10p-6.8n	10p-18n	390p-33n	680p-47n
	X7R	n/a	n/a	10p-15n	15p-10n	15p-10n	22p-33n	180p-68n	180p-82n	180p-100n	390p-150n	560p-220n	10n-470n
1.5kV	COG/NPO	n/a	n/a	1.0p-150p	3.9p-470p	4.7p-680p	10p-1.5n	10p-2.7n	10p-3.3n	10p-4.7n	10p-12n	390p-22n	680p-33n
	X7R	n/a	n/a	10p-10n	15p-6.8n	15p-6.8n	22p-22n	180p-47n	180p-47n	180p-68n	390p-100n	560p-150n	10n-330n
2kV	COG/NPO	n/a	n/a	1.0p-100p	3.9p-220p	4.7p-270p	10p-820p	10p-1.2n	10p-1.8n	10p-2.2n	10p-5.6n	390p-10n	680p-18n
	X7R	n/a	n/a	10p-2.2n	15p-4.7n	15p-4.7n	22p-10n	180p-10n	180p-27n	180p-33n	390p-47n	560p-82n	10n-150n
2.5kV	COG/NPO	n/a	n/a	n/a	n/a	4.7p-220p	10p-680p	10p-1.0n	10p-1.5n	10p-1.8n	10p-4.7n	390p-6.8n	680p-12n
	X7R	n/a	n/a	n/a	n/a	15p-1.5n	22p-3.3n	180p-6.8n	180p-8.2n	180p-12n	390p-33n	560p-68n	10n-100n
3kV	COG/NPO	n/a	n/a	n/a	n/a	4.7p-180p	10p-470p	10p-820p	10p-1.2n	10p-1.5n	10p-2.2n	390p-4.7n	680p-8.2n
	X7R	n/a	n/a	n/a	n/a	15p-1.2n	22p-2.7n	180p-3.9n	180p-6.8n	180p-8.2n	390p-22n	560p-47n	10n-82n
4kV	COG/NPO	n/a	n/a	n/a	n/a	1.0p-150p*	2.2-390p*	10p-680p*	10p-1.0n*	10p-1.2n*	10p-1.0n	390p-2.2n	680p-4.7n
	X7R	n/a	n/a	n/a	n/a	100p-1.0n*	100p-2.2n*	100p-2.2n*	100p-4.7n*	100p-5.6n*	390p-6.8n	560p-15n	10n-33n
5kV	COG/NPO	n/a	n/a	n/a	n/a	1.0p-82p*	2.2p-270p*	10p-470p*	10p-680p*	10p-820p*	10p-560p	390p-1.5n	680p-3.3n
	X7R	n/a	n/a	n/a	n/a	100p-680p*	100p-1.2n*	100p-1.8n*	100p-3.9n*	100p-4.7n*	n/a	560p-10n	10n-22n
6kV	COG/NPO	n/a	n/a	n/a	n/a	1.0p-56p*	2.2p-220p*	10p-330p*	10p-470p*	10p-560p*	n/a	n/a	n/a
	X7R	n/a	n/a	n/a	n/a	68p-390p*	100p-1.0n*	100p-1.5n*	100p-2.2n*	100p-2.7n*	n/a	n/a	n/a

Orange, Red, Yellow = New Ranges

N.B. Capacitance in F. * These parts may require conformal coating post soldering.

