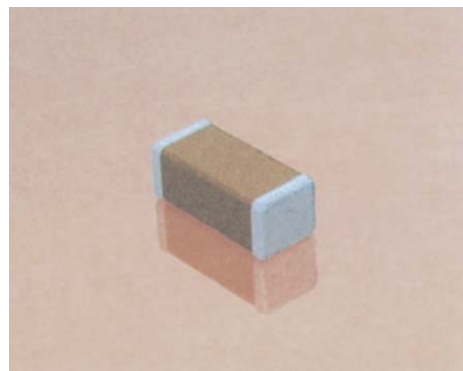




## 1210, 1825, 2225, 3640 X7R Dielectric, High Voltage MLC Chips, Capacitor

### General Description:

High value, low leakage and small size are difficult parameters to obtain in capacitors for high voltage systems. AVX special high voltage MLC chip capacitors meet these performance characteristics and are designed for applications such as snubbers in high frequency power converters, resonators in SMPS, and high voltage coupling/dc blocking. These high voltage chip designs exhibit low ESRs at high frequencies. Larger physical sizes than normally encountered chips are used to make high voltage MLC chip products. Special precautions must be taken in applying these chips in surface mount assemblies. The temperature gradient during heating or cooling cycles should not exceed 4°C per second. The preheat temperature must be within 50°C of the peak temperature reached by the ceramic bodies through the soldering process. Chip sizes 1210 and larger should be reflow soldered only. Capacitors may require protective surface coating to prevent external arcing. For 1825, 2225 and 3640 sizes, AVX offers leaded version in either thru-hole or SMT configurations (for details see section on high voltage leaded MLC chips).



### Key Features:

#### X7R Dielectric

**Capacitance Range:** 10 pF to 0.56  $\mu$ F (25°C, 1.0  $\pm$ 0.2 Vrms at 1kHz)

**Capacitance Tolerances:**  $\pm$ 10%;  $\pm$ 20%; +80%, -20%

**Dissipation Factor:** 2.5% max. (+25°C, 1.0  $\pm$ 0.2 Vrms, 1kHz)

**Operating Temperature Range:** -55°C to +125°C

**Temperature Characteristic:**  $\pm$ 15% (0 VDC)

**Voltage Ratings:** 600, 630, 1000, 1500, 2000, 2500, 3000, 4000 & 5000 VDC (+125°C)

**Insulation Resistance:** (+25°C, at 500 VDC) 100K M $\Omega$  min. or 1000 M $\Omega$ -  $\mu$ F min., whichever is less

**Insulation Resistance:** (+125°C, at 500 VDC) 10K M $\Omega$  min. or 100 M $\Omega$ -  $\mu$ F min., whichever is less

**Dielectric Strength:** Minimum 120% rated voltage for 5 seconds at 50 mA max. current

## Applications:

- Snubbers in high frequency power converters,
- Resonators in SMPS, and
- High voltage coupling/dc blocking

## Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
1210GC332KAT1A	1789451	52R2425	CAPACITOR, 1210, 2000V, 3.3NF
1808CC683KAT1A	1789452	52R2426	CAPACITOR, 1808, 600V, 68NF
1812GC682KAT1A	1789453	52R2427	CAPACITOR, 1812, 2000V, 6.8NF
1812GC822KAT1A	1789455	52R2428	CAPACITOR, 1812, 2000V, 8.2NF
1812HC272KAZ1A	1789456	52R2429	CAPACITOR, 1812, 3000V, 2.7NF
1812HC332KAT1A	1789457	52R2430	CAPACITOR, 1812, 3000V, 3.3NF
1825CC274KAT1A	1789458	52R2431	CAPACITOR, 1825, 600V, 270NF
1825CC274KAZ1A	1789459	52R2432	CAPACITOR, 1825, 600V, 270NF
1825GC153KAT1A	1789460	52R2433	CAPACITOR, 1825, 2000V, 15NF
1825GC223KAT1A	1789461	52R2434	CAPACITOR, 1825, 2000V, 22NF
1825GC223KAZ1A	1789462	52R2435	CAPACITOR, 1825, 2000V, 22NF
1825WC153KAT1A	1789463	52R2437	CAPACITOR, 1825, 2500V, 15NF
1825HC103KAT1A	1789464	52R2436	CAPACITOR, 1825, 3000V, 10NF
2220CC274KAT1A	1789465	52R2442	CAPACITOR, 2220, 600V, 270NF
2220CC274KAZ1A	1789467	52R2443	CAPACITOR, 2220, 600V, 270NF
2220AC104KAT1A	1789468	52R2438	CAPACITOR, 2220, 1000V, 100NF
2220AC104KAZ1A	1789469	52R2439	CAPACITOR, 2220, 1000V, 100NF
2220AC124KAT1A	1789470	52R2440	CAPACITOR, 2220, 1000V, 120NF
2220AC124KAZ1A	1789471	52R2441	CAPACITOR, 2220, 1000V, 120NF
2220SC473KAT1A	1789472	52R2451	CAPACITOR, 2220, 1500V, 47NF
2220SC473KAZ1A	1789473	52R2452	CAPACITOR, 2220, 1500V, 47NF
2220GC273KAT1A	1789474	52R2444	CAPACITOR, 2220, 2000V, 27NF
2220GC273KAZ1A	1789475	52R2445	CAPACITOR, 2220, 2000V, 27NF
2220HC103KAT1A	1789476	52R2446	CAPACITOR, 2220, 3000V, 10NF
2220HC103KAZ1A	1789477	52R2447	CAPACITOR, 2220, 3000V, 10NF

2220HC562KAT1A	1789479	52R2448	CAPACITOR, 2220, 3000V, 5.6NF
2220HC682KAT1A	1789481	52R2449	CAPACITOR, 2220, 3000V, 6.8NF
2220HC682KAZ1A	1789482	52R2450	CAPACITOR, 2220, 3000V, 6.8NF
2225SC683KAT1A	1789483	52R2458	CAPACITOR, 2225, 1500V, 68NF
2225SC683KAZ1A	1789484	52R2459	CAPACITOR, 2225, 1500V, 68NF
2225GC333KAT1A	1789485	52R2453	CAPACITOR, 2225, 2000V, 33NF
2225GC333KAZ1A	1789486	52R2454	CAPACITOR, 2225, 2000V, 33NF
2225WC223KAT1A	1789487	52R2460	CAPACITOR, 2225, 2500V, 22NF
2225HC103KAT1A	1789488	52R2455	CAPACITOR, 2225, 3000V, 10NF
2225HC153KAT1A	1789489	52R2456	CAPACITOR, 2225, 3000V, 15NF
2225HC153KAZ1A	1789490	52R2457	CAPACITOR, 2225, 3000V, 15NF