

# FLEXISAFE MLC Chips

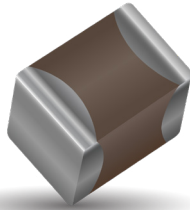


## General Specifications and Capacitance Range For Ultra Safety Critical Applications

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

| FS05  | 5   | C                            | 104   | K   | Q  | Z  | 2   | A                                      |
|---|---|------------------------------|---|---|--|--|---|--|
| <b>Size</b><br>FS03 = 0603<br>FS05 = 0805<br>FS06 = 1206<br>FS10 = 1210 | <b>Voltage</b><br>16V = Y<br>25V = 3<br>50V = 5<br>100V = 1 | <b>Dielectric</b><br>X7R = C | <b>Capacitance Code (In pF)</b><br>2 Sig. Digits + Number of Zeros<br>e.g. 10µF = 106 | <b>Capacitance Tolerance</b><br>J = ±5%<br>K = ±10%<br>M = ±20% | <b>Failure Rate</b><br>A = Commercial<br>4 = Automotive<br>Q = APS | <b>Terminations</b><br>Z = FLEXITERM™<br>*X = FLEXITERM™ with 5% min lead<br>*Not RoHS Compliant | <b>Packaging</b><br>2 = 7" Reel<br>4 = 13" Reel | <b>Special Code</b><br>A = Std.Product |

### CAPACITANCE RANGE FLEXISAFE X7R

| SIZE | wVDC  | FS03 = 0603 |    |    |     | FS05 = 0805 |    |    |     | FS06 = 1206 |    |    | FS10 = 1210 |    |    |
|------|-------|-------------|----|----|-----|-------------|----|----|-----|-------------|----|----|-------------|----|----|
|      |       | 16          | 25 | 50 | 100 | 16          | 25 | 50 | 100 | 16          | 25 | 50 | 16          | 25 | 50 |
| 102  | 1000  | G           | G  | G  | G   | J           | J  | J  | J   | J           | J  | J  |             |    |    |
| 182  | 1800  | G           | G  | G  | G   | J           | J  | J  | J   | J           | J  | J  |             |    |    |
| 222  | 2200  | G           | G  | G  | G   | J           | J  | J  | J   | J           | J  | J  |             |    |    |
| 332  | 3300  | G           | G  | G  | G   | J           | J  | J  | J   | J           | J  | J  |             |    |    |
| 472  | 4700  | G           | G  | G  | G   | J           | J  | J  | J   | J           | J  | J  |             |    |    |
| 682  | 6800  | G           | G  | G  | G   | J           | J  | J  | J   | J           | J  | J  |             |    |    |
| 103  | 0.01  | G           | G  | G  | G   | J           | J  | J  | J   | J           | J  | J  |             |    |    |
| 123  | 0.012 | G           | G  | G  |     | J           | J  | J  | J   | J           | J  | J  |             |    |    |
| 153  | 0.015 | G           | G  | G  |     | J           | J  | J  | J   | J           | J  | J  |             |    |    |
| 183  | 0.018 | G           | G  | G  |     | J           | J  | J  | J   | J           | J  | J  |             |    |    |
| 223  | 0.022 | G           | G  | G  |     | N           | N  | N  | N   | J           | J  | J  |             |    |    |
| 273  | 0.027 |             |    |    |     | N           | N  | N  | N   | J           | J  | J  |             |    |    |
| 333  | 0.033 |             |    |    |     | N           | N  | N  | N   | J           | J  | J  |             |    |    |
| 473  | 0.047 |             |    |    |     | N           | N  | N  | N   | M           | M  | M  |             |    |    |
| 563  | 0.056 |             |    |    |     | N           | N  | N  | N   | M           | M  | M  |             |    |    |
| 683  | 0.068 |             |    |    |     | N           | N  | N  | N   | M           | M  | M  |             |    |    |
| 823  | 0.082 |             |    |    |     | N           | N  | N  | N   | M           | M  | M  |             |    |    |
| 104  | 0.1   |             |    |    |     | N           | N  | N  | N   | M           | M  | M  |             |    |    |
| 124  | 0.12  |             |    |    |     |             |    |    |     | M           | M  | M  |             |    |    |
| 154  | 0.15  |             |    |    |     |             |    |    |     | M           | M  | M  | Q           | Q  | Q  |
| 224  | 0.22  |             |    |    |     |             |    |    |     |             |    |    | Q           | Q  | Q  |
| 334  | 0.33  |             |    |    |     |             |    |    |     |             |    |    | Q           | Q  | Q  |
| 474  | 0.47  |             |    |    |     |             |    |    |     |             |    |    | Q           | Q  | Q  |

| Letter         | G            | J            | M            | N            | Q            |
|----------------|--------------|--------------|--------------|--------------|--------------|
| Max. Thickness | 0.90 (0.035) | 0.94 (0.037) | 1.27 (0.050) | 1.40 (0.055) | 1.78 (0.070) |
|                | PAPER        |              | EMBOSSED     |              |              |

