



## C0G CAPACITANCE RANGE – 1210, 1812, 1825, 2220, 2225

| CAP.<br>PF | CAP<br>CODE | CAP.<br>TOL. | C1210* |      |      | C1812* |      |      | C1825* |      |      | C2220 |      |      | C2225 |      |      |
|------------|-------------|--------------|--------|------|------|--------|------|------|--------|------|------|-------|------|------|-------|------|------|
|            |             |              | 50V    | 100V | 200V | 50V    | 100V | 200V | 50V    | 100V | 200V | 50V   | 100V | 200V | 50V   | 100V | 200V |
| 10         | 100         | D J,K,M      | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 12         | 120         | D J,K,M      | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 15         | 150         | D G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 18         | 180         | D G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 22         | 220         | D G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 27         | 270         | D,F,G,J,K,M  | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 33         | 330         | D,F,G,J,K,M  | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 39         | 390         | D,F,G,J,K,M  | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 47         | 470         | D,F,G,J,K,M  | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 56         | 560         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 68         | 680         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 82         | 820         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 100        | 101         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 120        | 121         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 150        | 151         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 180        | 181         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 220        | 221         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 270        | 271         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 330        | 331         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 390        | 391         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 470        | 471         | F,G,J,K,M    | FB     | FB   | FB   |        |      |      |        |      |      |       |      |      |       |      |      |
| 560        | 561         | F,G,J,K,M    | FB     | FB   | FB   | GB     | GB   | GB   |        |      |      |       |      |      |       |      |      |
| 680        | 681         | F,G,J,K,M    | FB     | FB   | FB   | GB     | GB   | GB   |        |      |      |       |      |      |       |      |      |
| 820        | 821         | F,G,J,K,M    | FB     | FB   | FB   | GB     | GB   | GB   |        |      |      |       |      |      |       |      |      |
| 1000       | 102         | F,G,J,K,M    | FB     | FB   | FB   | GB     | GB   | GB   |        |      |      |       |      |      |       |      |      |
| 1200       | 122         | F,G,J,K,M    | FB     | FB   | FB   | GB     | GB   | GB   |        |      |      |       |      |      |       |      |      |
| 1500       | 152         | F,G,J,K,M    | FB     | FB   | FE   | GB     | GB   | GB   |        |      |      |       |      |      |       |      |      |
| 1800       | 182         | F,G,J,K,M    | FB     | FB   | FE   | GB     | GB   | GB   |        |      |      |       |      |      |       |      |      |
| 2200       | 222         | F,G,J,K,M    | FB     | FC   | FG   | GB     | GB   | GB   |        |      |      |       |      |      |       |      |      |
| 2700       | 272         | F,G,J,K,M    | FB     | FC   | FC   | GB     | GB   | GB   |        |      |      |       |      |      |       |      |      |
| 3300       | 332         | F,G,J,K,M    | FB     | FF   | FF   | GB     | GB   | GB   |        |      |      |       |      |      |       |      |      |
| 3900       | 392         | F,G,J,K,M    | FB     | FF   |      | GB     | GB   | GB   | HB     | HB   | HB   |       |      |      |       |      |      |
| 4700       | 472         | F,G,J,K,M    | FF     | FF   |      | GB     | GB   | GD   | HB     | HB   | HB   |       |      |      |       |      |      |
| 5600       | 562         | F,G,J,K,M    | FB     | FF   |      | GB     | GB   | GF   | HB     | HB   | HB   |       |      |      |       |      |      |
| 6800       | 682         | F,G,J,K,M    | FB     | FG   |      | GB     | GB   | GJ   | HB     | HB   | HB   |       |      |      |       |      |      |
| 8200       | 822         | F,G,J,K,M    | FC     |      |      | GB     | GB   |      | HB     | HB   | HB   | JB    | JB   |      |       |      |      |
| 10,000     | 103         | F,G,J,K,M    | FF     |      |      | GB     | GD   |      | HB     | HB   | HE   | JB    | JB   |      |       |      |      |
| 12,000     | 123         | F,G,J,K,M    | FG     |      |      |        |      |      | HB     | HB   | HE   | JB    | JB   |      |       |      |      |
| 15,000     | 153         | F,G,J,K,M    |        |      |      |        |      |      | HB     | HB   |      | JB    | JB   |      |       |      |      |
| 18,000     | 183         | F,G,J,K,M    |        |      |      |        |      |      | HB     | HB   |      | JB    | JB   |      |       |      |      |
| 22,000     | 223         | F,G,J,K,M    |        |      |      |        |      |      | HB     | HE   |      | JB    |      |      |       |      |      |
| 27,000     | 273         | F,G,J,K,M    |        |      |      |        |      |      | HB     | HE   |      | JB    |      |      |       |      |      |
| 33,000     | 333         | F,G,J,K,M    |        |      |      |        |      |      | HB     |      |      |       |      |      |       |      |      |

## X7R CAPACITANCE RANGE – 0402, 0603, 0805, 1206

| CAP.<br>PF | CAP<br>CODE | CAP.<br>TOL. | C0402* |     |     |     |     | C0603* |     |     |     |     | C0805* |      |      |     |     | C1206* |     |      |      |      |     |     |     |     |      |      |
|------------|-------------|--------------|--------|-----|-----|-----|-----|--------|-----|-----|-----|-----|--------|------|------|-----|-----|--------|-----|------|------|------|-----|-----|-----|-----|------|------|
|            |             |              | 6.3V   | 10V | 16V | 25V | 50V | 6.3V   | 10V | 16V | 25V | 50V | 100V   | 200V | 6.3V | 10V | 16V | 25V    | 50V | 100V | 200V | 6.3V | 10V | 16V | 25V | 50V | 100V | 200V |
| 150        | 151         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   |      |     |     |     |     |      |      |
| 180        | 181         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   |      |     |     |     |     |      |      |
| 220        | 221         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   |      |     |     |     |     |      |      |
| 270        | 271         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   |      |     |     |     |     |      |      |
| 330        | 331         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   |      |     |     |     |     |      |      |
| 390        | 391         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   |      |     |     |     |     |      |      |
| 470        | 471         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   |      |     |     |     |     |      |      |
| 560        | 561         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   |      |     |     |     |     |      |      |
| 680        | 681         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   |      |     |     |     |     |      |      |
| 820        | 821         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   |      |     |     |     |     |      |      |
| 1000       | 102         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 1200       | 122         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 1500       | 152         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 1800       | 182         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 2200       | 222         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 2700       | 272         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 3300       | 332         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 3900       | 392         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 4700       | 472         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 5600       | 562         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 6800       | 682         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 8200       | 822         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 10,000     | 103         | K,M,J        | BB     | BB  | BB  | BB  | BB  | CB     | CB  | CB  | CB  | CB  | CB     | CB   | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 12,000     | 123         | K,M,J        |        |     |     |     |     | CB     | CB  | CB  | CB  | CB  |        |      | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 15,000     | 153         | K,M,J        |        |     |     |     |     | CB     | CB  | CB  | CB  | CB  |        |      | DD   | DD  | DD  | DD     | DD  | DD   | DD   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 18,000     | 183         | K,M,J        |        |     |     |     |     | CB     | CB  | CB  | CB  | CB  |        |      | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 22,000     | 223         | K,M,J        |        |     |     |     |     | CB     | CB  | CB  | CB  | CB  |        |      | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 27,000     | 273         | K,M,J        |        |     |     |     |     | CB     | CB  | CB  | CB  | CB  |        |      | DC   | DC  | DC  | DC     | DC  | DC   | DC   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 33,000     | 333         | K,M,J        |        |     |     |     |     | CB     | CB  | CB  | CB  | CB  |        |      | DD   | DD  | DD  | DD     | DD  | DD   | DD   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 39,000     | 393         | K,M,J        |        |     |     |     |     | CB     | CB  | CB  | CB  | CB  |        |      | DD   | DD  | DD  | DD     | DD  | DD   | DD   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 47,000     | 473         | K,M,J        |        |     |     |     |     | CB     | CB  | CB  | CB  | CB  |        |      | DD   | DD  | DD  | DD     | DD  | DD   | DD   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 56,000     | 563         | K,M,J        |        |     |     |     |     | CB     | CB  | CB  | CB  | CC  |        |      | DD   | DD  | DD  | DD     | DD# | DD   | DD   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 68,000     | 683         | K,M,J        |        |     |     |     |     | CB     | CB  | CB  | CB  | CC  |        |      | DD   | DD  | DD  | DD     | DD  | DD   | DD   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 82,000     | 823         | K,M,J        |        |     |     |     |     | CB     | CB  | CB  | CB  | CC  |        |      | DD   | DD  | DD  | DD     | DD  | DD   | DD   | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 100,000    | 104         | K,M,J        |        |     |     |     |     | CB#    | CB# | CB# | CB# | CC# |        |      | DD   | DD  | DD  | DD     | DD# | DD#  | DD#  | EB   | EB  | EB  | EB  | EB  | EB   | EB   |
| 120,000    | 124         | K,M,J        |        |     |     |     |     | CB#    | CB# | CB# |     |     |        |      | DC   | DC  | DC  | DC     |     |      |      | EC   | EC  | EC  | EC  | EC  | EC   | EC   |
| 150,000    | 154         | K,M,J        |        |     |     |     |     | CB#    | CB# | CB# |     |     |        |      | DC   | DC  | DC  | DC     |     |      |      | EC   | EC  | EC  | EC  | EC  | EC   | EC   |
| 180,000    | 184         | K,M,J        |        |     |     |     |     | CB#    | CB# | CB# |     |     |        |      | DC   | DC  | DC  | DC     |     |      |      | EC   | EC  | EC  | EC  | EC  | EC   | EC   |
| 220,000    | 224         | K,M,J        |        |     |     |     |     | CB#    | CB# | CB# |     |     |        |      | DC   | DC  | DC  | DC     |     |      |      | EC   | EC  | EC  | EC  | EC  | EC   | EC   |
| 270,000    | 274         | K,M,J        |        |     |     |     |     |        |     |     |     |     |        |      |      |     |     |        |     |      |      |      |     |     |     |     |      |      |

**X7R CAPACITANCE RANGE – 1210, 1812, 1825, 2220, 2225**

| CAP.<br>PF | CAP<br>CODE | CAP.<br>TOL. | C1210* |     |     |     |     |      |      |     | C1812* |      |     | C1825* |      |     | C2220 |      |     | C2225 |      |  |
|------------|-------------|--------------|--------|-----|-----|-----|-----|------|------|-----|--------|------|-----|--------|------|-----|-------|------|-----|-------|------|--|
|            |             |              | 6.3V   | 10V | 16V | 25V | 50V | 100V | 200V | 50V | 100V   | 200V | 50V | 100V   | 200V | 50V | 100V  | 200V | 50V | 100V  | 200V |  |
| 2200       | 222         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   |     |        |      |     |        |      |     |       |      |     |       |      |  |
| 2700       | 272         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   |     |        |      |     |        |      |     |       |      |     |       |      |  |
| 3300       | 332         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   |     |        |      |     |        |      |     |       |      |     |       |      |  |
| 3900       | 392         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   |     |        |      |     |        |      |     |       |      |     |       |      |  |
| 4700       | 472         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   |     |        |      |     |        |      |     |       |      |     |       |      |  |
| 5600       | 562         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   |     |        |      |     |        |      |     |       |      |     |       |      |  |
| 6800       | 682         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   | GB  | GB     | GB   |     |        |      |     |       |      |     |       |      |  |
| 8200       | 822         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   | GB  | GB     | GB   |     |        |      |     |       |      |     |       |      |  |
| 10,000     | 103         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   | GB  | GB     | GB   |     |        |      |     |       |      |     |       |      |  |
| 12,000     | 123         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   | GB  | GB     | GB   |     |        |      |     |       |      |     |       |      |  |
| 15,000     | 153         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   | GB  | GB     | GB   |     |        |      |     |       |      |     |       |      |  |
| 18,000     | 183         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   | GB  | GB     | GB   |     |        |      |     |       |      |     |       |      |  |
| 22,000     | 223         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   | GB  | GB     | GB   | HB  | HB     | HB   |     |       |      |     |       |      |  |
| 27,000     | 273         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   | GB  | GB     | GB   | HB  | HB     | HB   |     |       |      |     |       |      |  |
| 33,000     | 333         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   | GB  | GB     | GB   | HB  | HB     | HB   |     |       |      |     |       |      |  |
| 39,000     | 393         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   | GB  | GB     | GB   | HB  | HB     | HB   |     |       |      |     |       |      |  |
| 47,000     | 473         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FB   | GB  | GB     | GB   | HB  | HB     | HB   |     |       |      | KC  | KC    |      |  |
| 56,000     | 563         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FC   | GB  | GB     | GB   | HB  | HB     | HB   |     |       |      | KC  | KC    |      |  |
| 68,000     | 683         | K,M,J        | FB     | FB  | FB  | FB  | FB  | FB   | FC   | GB  | GB     | GB   | HB  | HB     | HB   |     |       |      | KC  | KC    |      |  |
| 82,000     | 823         | K,M,J        | FB     | FB  | FB  | FB  | FC  | FC   | FF   | GB  | GB     | GB   | HB  | HB     | HB   |     |       |      | KC  | KC    |      |  |
| 100,000    | 104         | K,M,J        | FB     | FB  | FB  | FB  | FD  | FD   | FG   | GB  | GB     | GB   | HB  | HB     | HB   |     |       |      | KC  | KC    |      |  |
| 120,000    | 124         | K,M,J        | FB     | FB  | FB  | FB  | FD  | FD   |      | GB  | GB     | GB   | HB  | HB     | HB   |     |       |      | KC  | KC    |      |  |
| 150,000    | 154         | K,M,J        | FC     | FC  | FC  | FC  | FD  | FD   |      | GB  | GB     | GE   | HB  | HB     | HB   |     |       |      | KC  | KC    |      |  |
| 180,000    | 184         | K,M,J        | FC     | FC  | FC  | FC  | FD  | FD   |      | GB  | GB     | GG   | HB  | HB     | HB   |     |       |      | KC  | KC    |      |  |
| 220,000    | 224         | K,M,J        | FC     | FC  | FC  | FC  | FD  | FD   |      | GB  | GB     |      | HB  | HB     | HB   |     |       |      | KC  | KC    |      |  |
| 270,000    | 274         | K,M,J        | FC     | FC  | FC  | FC# | FD# | FD#  |      | GB  | GH     |      | HB  | HB     | HB   | JC  | JC    | JC   | KB  | KC    |      |  |
| 330,000    | 334         | K,M,J        | FD     | FD  | FD  | FD# | FD# | FD#  |      | GB  | GH     |      | HB  | HB     | HB   | JC  | JC    | JC   | KB  | KC    |      |  |
| 390,000    | 394         | K,M,J        | FD     | FD  | FD  | FD  | FD# | FD#  |      | GB  |        |      | HB  | HB     | HD   | JC  | JC    | JC   | KB  | KC    |      |  |
| 470,000    | 474         | K,M,J        | FD     | FD  | FD  | FD  | FD# | FD#  |      | GB  |        |      | HB  | HB     |      | JC  | JC    | JC   | KB  | KD    |      |  |
| 560,000    | 564         | K,M,J        | FD     | FD  | FD  | FD  | FD# | FD#  |      | GC  |        |      | HB  | HD     |      | JC  | JC    | JC   | KB  |       |      |  |
| 680,000    | 684         | K,M,J        | FD     | FD  | FD  | FD  | FD# | FD#  |      | GC  |        |      | HB  | HD     |      | JC  | JD    |      | KB  |       |      |  |
| 820,000    | 824         | K,M,J        | FF     | FF  | FF  | FF  | FF# | FF#  |      | GE  |        |      | HB  |        |      | JC  | JF    |      | KB  |       |      |  |
| 1,000,000  | 105         | K,M,J        | FH     | FH  | FH  | FH  | FH# | FH#  |      | GE  |        |      | HB  |        |      | JC  |       |      | KB  |       |      |  |
| 1,200,000  | 125         | K,M,J        | FH     | FH  | FH  | FH  |     |      |      |     |        |      | HB  |        |      | JC  |       |      | KB  |       |      |  |
| 1,500,000  | 155         | K,M,J        | FH     | FH  | FH  | FH  |     |      |      |     |        |      | HB  |        |      | JC  |       |      | KC  |       |      |  |
| 1,800,000  | 185         | K,M,J        | FH     | FH  | FH  | FH  |     |      |      |     |        |      | HD  |        |      | JD  |       |      | KD  |       |      |  |
| 2,200,000  | 225         | K,M,J        | FJ     | FJ  | FJ  | FJ  |     |      |      |     |        |      | HF  |        |      | JD  | JF    |      | KD  |       |      |  |

\* Indicates EIA preferred chip sizes.

NOTE: For non-standard capacitance values or voltages, contact your local KEMET sales representative.

50 Volt Ceramic Chips can be used for 63 volt applications.

# Extended Range Values — Cap and DF measured @ 0.5 Vrms.

**X5R CAPACITANCE RANGE**

| CAP.<br>pF | CAP<br>CODE | CAP.<br>TOL. | C0402* |     | C0603* |     | C0805* |     | C1206* |     |     |     | C1210* |     |     |     |     |
|------------|-------------|--------------|--------|-----|--------|-----|--------|-----|--------|-----|-----|-----|--------|-----|-----|-----|-----|
|            |             |              | 6.3V   | 10V | 6.3V   | 10V | 6.3V   | 10V | 6.3V   | 10V | 16V | 25V | 6.3V   | 10V | 16V | 25V | 50V |
| 12,000     | 123         | K,M          | BB     | BB  |        |     |        |     |        |     |     |     |        |     |     |     |     |
| 15,000     | 153         | K,M          | BB     | BB  |        |     |        |     |        |     |     |     |        |     |     |     |     |
| 18,000     | 183         | K,M          | BB     | BB  |        |     |        |     |        |     |     |     |        |     |     |     |     |
| 22,000     | 223         | K,M          | BB     | BB  |        |     |        |     |        |     |     |     |        |     |     |     |     |
| 27,000     | 273         | K,M          | BB     | BB  |        |     |        |     |        |     |     |     |        |     |     |     |     |
| 33,000     | 333         | K,M          | BB     | BB  |        |     |        |     |        |     |     |     |        |     |     |     |     |
| 39,000     | 393         | K,M          | BB     | BB  |        |     |        |     |        |     |     |     |        |     |     |     |     |
| 47,000     | 473         | K,M          | BB     | BB  |        |     |        |     |        |     |     |     |        |     |     |     |     |
| 56,000     | 563         | K,M          | BB     | BB  |        |     |        |     |        |     |     |     |        |     |     |     |     |
| 68,000     | 683         | K,M          | BB     | BB  |        |     |        |     |        |     |     |     |        |     |     |     |     |
| 82,000     | 823         | K,M          | BB     | BB  |        |     |        |     |        |     |     |     |        |     |     |     |     |
| 100,000    | 104         | K,M          | BB     | BB  |        |     |        |     |        |     |     | EB  |        |     |     |     |     |
| 120,000    | 124         | K,M          |        |     |        |     |        |     |        |     |     | EC  |        |     |     |     |     |
| 150,000    | 154         | K,M          |        |     |        |     |        |     |        |     |     | EC  |        |     |     |     |     |
| 180,000    | 184         | K,M          |        |     |        |     |        |     |        |     |     | EC  |        |     |     |     |     |
| 220,000    | 224         | K,M          |        |     |        |     |        |     |        |     |     | EC  |        |     |     |     |     |
| 270,000    | 274         | K,M          |        |     |        |     |        |     |        |     |     | EB  |        |     |     |     |     |
| 330,000    | 334         | K,M          |        |     | CC     | CC  |        |     |        |     |     | EB  |        |     |     |     |     |
| 390,000    | 394         | K,M          |        |     | CC     | CC  |        |     |        |     |     | EB  |        |     |     |     |     |
| 470,000    | 474         | K,M          |        |     | CC     | CC  |        |     |        |     |     | EB  |        |     |     |     |     |
| 560,000    | 564         | K,M          |        |     | CC     | CC  |        |     |        |     |     | EE  |        |     |     |     |     |
| 680,000    | 684         | K,M          |        |     | CC     | CC  |        |     |        |     |     | EF  |        |     |     |     |     |
| 820,000    | 824         | K,M          |        |     | CC     | CC  |        |     |        |     |     | EF  |        |     |     |     |     |
| 1,000,000  | 105         | K,M          |        |     | CC     | CC  |        |     | DD     | DD  |     | EH  |        |     | FH+ | FH+ | FH+ |
| 1,200,000  | 125         | K,M          |        |     | CC     | CC  |        |     | DE     | DE  | EC  | EC  |        |     | FD+ | FD+ |     |
| 1,500,000  | 155         | K,M          |        |     | CC     | CC  |        |     | DE     | DE  | EC  | EC  |        |     | FD+ | FD+ |     |
| 1,800,000  | 185         | K,M          |        |     | CC     | CC  |        |     | DH     | DH  | EC  | EC  |        |     | FD+ | FD+ |     |
| 2,200,000  | 225         | K,M          |        |     | CC     | CC  |        |     | DH     | DH  | EE  | EE  |        |     | FG+ | FG+ |     |
| 2,700,000  | 275         | K,M          |        |     |        |     |        |     | DD     | DD  | EF  | EF  |        |     | FG+ | FG+ |     |
| 3,300,000  | 335         | K,M          |        |     |        |     |        |     | DE     | DE  | EH  | EH  |        |     | FH+ | FH+ |     |
| 4,700,000  | 475         | K,M          |        |     |        |     |        |     | DH     | DH  | EH  | EH  |        |     | FK+ | FK+ |     |
| 6,800,000  | 685         | K,M          |        |     |        |     |        |     | DH     | DH  | EH  | EH  |        |     | FJ+ | FJ+ |     |
| 8,200,000  | 825         | K,M          |        |     |        |     |        |     | DH     | DH  | EH  | EH  |        |     | FJ+ | FJ+ |     |
| 10,000,000 | 106         | K,M          |        |     |        |     |        |     | DH     | DH  | EH  | EH  |        |     | FK+ | FK+ |     |
| 12,000,000 | 126         | K,M          |        |     |        |     |        |     |        |     | EH  |     |        |     | FF+ | FF+ |     |
| 15,000,000 | 156         | K,M          |        |     |        |     |        |     |        |     | EH  |     |        |     | FF+ | FJ+ |     |
| 18,000,000 | 186         | K,M          |        |     |        |     |        |     |        |     | EH  |     |        |     | FG+ | FK+ |     |
| 22,000,000 | 226         | K,M          |        |     |        |     |        |     |        |     | EH  |     |        |     | FG+ | FK+ |     |

NOTE: For non-standard capacitance values or voltages, contact your local KEMET sales representative.

+ Reflow only

**See page 54 for Thickness Code Reference Chart.**

## THICKNESS CODE REFERENCE CHART

### PACKAGING QTY BASED ON FINISHED CHIP THICKNESS SPECIFICATIONS

| Thickness Code | Chip Size | Chip Thickness Range (mm) | Qty per Reel 7" Plastic | Qty per Reel 13" Plastic | Qty per Reel 7" Paper | Qty per Reel 13" Paper | Qty per Bulk Cassette |
|----------------|-----------|---------------------------|-------------------------|--------------------------|-----------------------|------------------------|-----------------------|
| AA             | 0201      | .30 ± .03                 | N/A                     | N/A                      | 15,000                | N/A                    | N/A                   |
| BB             | 0402      | .50 ± .05                 | N/A                     | N/A                      | 10,000                | 50,000                 | 50,000                |
| CB             | 0603      | .80 ± .07                 | N/A                     | N/A                      | 4,000                 | 10,000                 | 15,000                |
| CC             | 0603      | .80 ± .10                 | N/A                     | N/A                      | 4,000                 | 10,000                 | N/A                   |
| DB             | 0805      | .60 ± .10                 | N/A                     | N/A                      | N/A                   | N/A                    | 10,000                |
| DC             | 0805      | .78 ± .10                 | 4,000                   | 10,000                   | 4,000                 | 10,000                 | N/A                   |
| DD             | 0805      | .90 ± .10                 | 4,000                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| DE             | 0805      | 1.00 ± .10                | 2,500                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| DF             | 0805      | 1.10 ± .10                | 2,500                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| DG             | 0805      | 1.25 ± .15                | 2,500                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| DH             | 0805      | 1.25 ± .20                | 2,500                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| EB             | 1206      | .78 ± .10                 | 4,000                   | 10,000                   | 4,000                 | 10,000                 | N/A                   |
| EC             | 1206      | .90 ± .10                 | 4,000                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| ED             | 1206      | 1.00 ± .10                | 2,500                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| EE             | 1206      | 1.10 ± .10                | 2,500                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| EF             | 1206      | 1.20 ± .15                | 2,500                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| EG             | 1206      | 1.60 ± .15                | 2,000                   | 8,000                    | N/A                   | N/A                    | N/A                   |
| EH             | 1206      | 1.60 ± .20                | 2,000                   | 8,000                    | N/A                   | N/A                    | N/A                   |
| EJ             | 1206      | 1.70 ± .20                | 2,000                   | 8,000                    | N/A                   | N/A                    | N/A                   |
| FB             | 1210      | .78 ± .10                 | 4,000                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| FC             | 1210      | .90 ± .10                 | 4,000                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| FD             | 1210      | .95 ± .10                 | 4,000                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| FE             | 1210      | 1.00 ± .10                | 2,500                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| FF             | 1210      | 1.10 ± .10                | 2,500                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| FG             | 1210      | 1.25 ± .15                | 2,500                   | 10,000                   | N/A                   | N/A                    | N/A                   |
| FH             | 1210      | 1.55 ± .15                | 2,000                   | 8,000                    | N/A                   | N/A                    | N/A                   |
| FJ             | 1210      | 1.85 ± .15                | 2,000                   | 8,000                    | N/A                   | N/A                    | N/A                   |
| FK             | 1210      | 2.10 ± .20                | 2,000                   | 8,000                    | N/A                   | N/A                    | N/A                   |
| GB             | 1812      | 1.00 ± .10                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| GC             | 1812      | 1.10 ± .10                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| GD             | 1812      | 1.25 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| GE             | 1812      | 1.30 ± .10                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| GF             | 1812      | 1.50 ± .10                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| GG             | 1812      | 1.55 ± .10                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| GH             | 1812      | 1.40 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| GJ             | 1812      | 1.70 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| HB             | 1825      | 1.10 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| HD             | 1825      | 1.30 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| HE             | 1825      | 1.40 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| HF             | 1825      | 1.50 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| JB             | 2220      | 1.00 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| JC             | 2220      | 1.10 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| JD             | 2220      | 1.30 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| JE             | 2220      | 1.40 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| JF             | 2220      | 1.50 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| KB             | 2225      | 1.00 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| KC             | 2225      | 1.10 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| KD             | 2225      | 1.30 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |
| KE             | 2225      | 1.40 ± .15                | 1,000                   | 4,000                    | N/A                   | N/A                    | N/A                   |

This chart refers to ceramic chip thickness codes on pages 50-53.