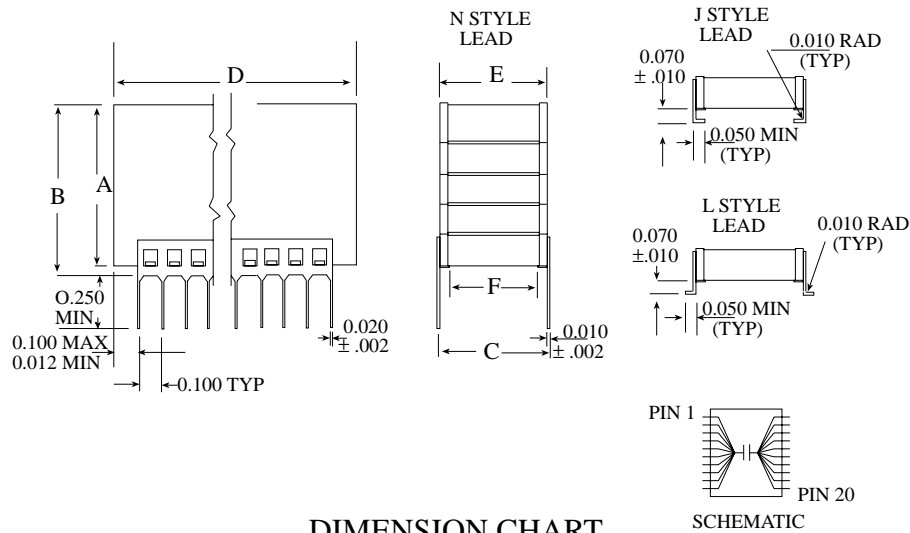


# INTEC

## HIGH FREQUENCY SMPS CERAMIC CAPACITORS APPLICATIONS INFORMATION

THE HIGH FREQUENCY OUTPUT FILTERING REQUIREMENTS OF SWITCH MODE POWER SUPPLIES CAN BE ACHIEVED BY USING SMPS CERAMIC CAPACITORS WHICH OUTPERFORM BOTH TANTLUM AND ELECTROLYTIC CAPACITORS. THE SMPS CERAMIC CAPACITOR'S EXTREMELY LOW EQUIVALENT SERIES RESISTANCE (ESR) AND EQUIVALENT SERIES INDUCTANCE (ESL) OFFER OPTIMUM PERFORMANCE AT HIGHER FREQUENCIES.



DIMENSION CHART

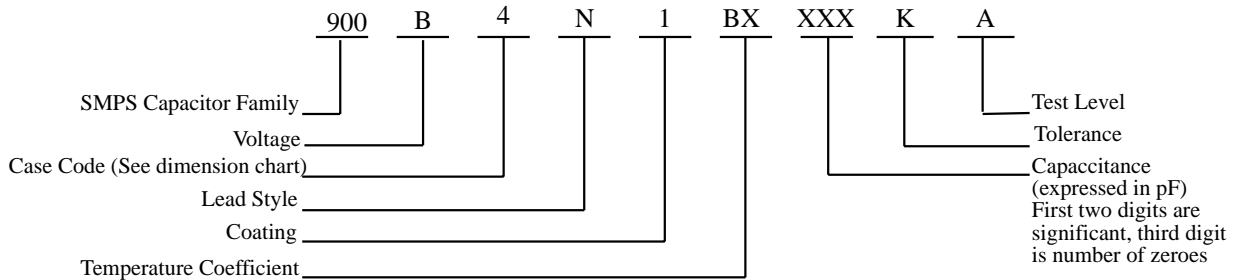
SCHEMATIC

| CASE CODE | DIM A | DIM B | DIM C | DIM D |       | DIM E | DIM F | LEADS PER SIDE |
|-----------|-------|-------|-------|-------|-------|-------|-------|----------------|
|           | MAX   | MAX   | ±.025 | MIN.  | MAX.  | MAX   | MIN   |                |
| 1         | .650  | .715  | .450  | 1.950 | 2.075 | .500  | .180  | 20             |
| 2         | .650  | .715  | .800  | 1.450 | 1.535 | .870  | .530  | 15             |
| 3         | .650  | .715  | .450  | 0.950 | 1.075 | .500  | .180  | 10             |
| 4         | .650  | .715  | .400  | 0.350 | 0.425 | .440  | .180  | 4              |
| 5         | .650  | .715  | .250  | 0.224 | 0.275 | .300  | .080  | 3              |
| 6         | .650  | .715  | 1.250 | 1.950 | 2.075 | 1.350 | .980  | 20             |

1/ CONSULT FACTORY FOR ACTUAL DIM A.

2/ CONSULT FACTORY FOR ACTUAL DIM B.

### ORDERING TERMINOLOGY FOR SMPS CERAMIC CAPACITORS



## ORDERING TERMINOLOGY FOR SMPS CERAMIC CAPACITORS (CONT.)

| VOLTAGE |       |
|---------|-------|
| G       | 50 V  |
| B       | 100 V |
| R       | 200 V |
| S       | 500 V |

| LEAD STYLE |                     |
|------------|---------------------|
| N          | STRAIGHT (THU HOLE) |
| J          | LEADS FORMED IN     |
| L          | LEADS FORMED OUT    |
| W          | WITHOUT LEADS       |

| COATING |          |
|---------|----------|
| 1       | UNCOATED |
| 2       | COATED   |

| TC |     |
|----|-----|
| BX | BX  |
| BR | BR  |
| BG | X7R |
| BY | NPO |

| TOLERANCE |        |
|-----------|--------|
| J         | ± 5 %  |
| K         | ± 10 % |
| M         | ± 20 % |

| TEST LEVEL |                           |
|------------|---------------------------|
| A          | ELECTRICAL SCREENING ONLY |
| B          | DESC DWG 87106 GROUP A    |
| C          | DESC DWG 88011 GROUP A    |

### MAXIMUM CAPACITANCE FOR EACH CASE CODE (ALL VALUES ARE $\mu\text{F}$ )

| CASE CODE         | 1     |       |       |       | 2     |       |       |       | 3     |       |      |      |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| VOLTAGE           | 50 V  | 100 V | 200 V | 500 V | 50 V  | 100 V | 200 V | 500 V | 50 V  | 100 V | 200V | 500V |
| X7R               | 100   | 56.0  | 27.0  | 12.0  | 150   | 82.0  | 39.0  | 18.0  | 47.0  | 27.0  | 12.0 | 5.6  |
| NPO               | 4.7   | 3.3   | 1.8   | 0.82  | 5.6   | 4.7   | 2.7   | 1.2   | 2.2   | 1.8   | 1.0  | 0.39 |
| DIM A<br>MAX.     | 0.650 |       |       |       | 0.650 |       |       |       | 0.650 |       |      |      |
| LEADS<br>PER SIDE | 20    |       |       |       | 15    |       |       |       | 10    |       |      |      |

| CASE CODE         | 4     |       |       |       | 5     |       |       |       | 6     |       |      |      |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| VOLTAGE           | 50 V  | 100 V | 200 V | 500 V | 50 V  | 100 V | 200 V | 500 V | 50 V  | 100 V | 200V | 500V |
| X7R               | 15.0  | 8.2   | 3.9   | 1.8   | 5.6   | 3.3   | 1.5   | 0.68  | 270   | 180   | 120  | 39.0 |
| NPO               | 0.56  | 0.47  | 0.27  | 0.12  | 0.27  | 0.22  | 0.1   | .047  | 15.0  | 12.0  | 5.6  | 2.2  |
| DIM A<br>MAX      | 0.650 |       |       |       | 0.650 |       |       |       | 0.650 |       |      |      |
| LEADS<br>PER SIDE | 4     |       |       |       | 3     |       |       |       | 20    |       |      |      |