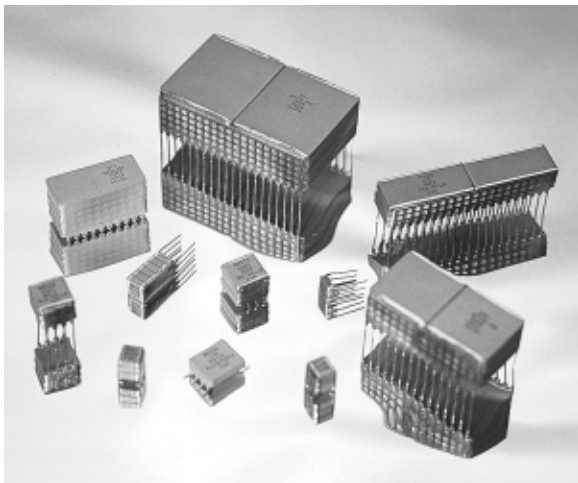




Military and Commercial SMPS - Switch Mode Power Supply Filter Capacitors



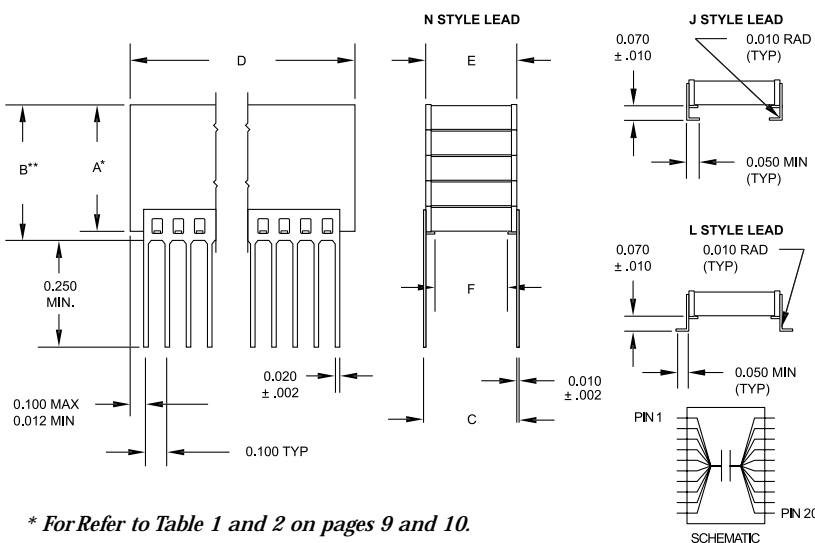
Today's high frequency switch mode power supplies (SMPS) require high performance capacitors in the input and output filters. Union Technology has developed a line of MLCC SMPS filter caps with extremely low equivalent series resistance (ESR) and low equivalent series inductance (ESL) that offer improved performance at higher frequencies. These capacitors have been extensively tested and have performance characteristics meeting the demands for efficient capacitors in these stringent applications.

Union Technology is approved to DSCC Drawings 87106 and 88011. Parts can be screened to the requirements of MIL-PRF-49470 or customer drawings.

Maximum Capacitance for each Case-Values in uF

| Case Code | 1 | | | | 2 | | | | 3 | | | |
|-----------|-----|------|------|------|-----|------|------|------|------|------|------|------|
| | 50V | 100V | 200V | 500V | 50V | 100V | 200V | 500V | 50V | 100V | 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 |

| Case Code | 4 | | | | 5 | | | | 6 | | | |
|-----------|------|------|------|------|------|------|------|-------|------|------|------|------|
| | 50V | 100V | 200V | 500V | 50V | 100V | 200V | 500V | 50V | 100V | 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 | 0.047 | 15.0 | 12.0 | 5.6 | 2.2 |



| Case Code | C ± .025 | D | | E (max) | Number of leads per side |
|-----------|----------|-------|-------|---------|--------------------------|
| | | Min | Max | | |
| | | 1 | .450 | | |
| 2 | .800 | 1.450 | 1.535 | .870 | 15 |
| 3 | .450 | .950 | 1.075 | .500 | 10 |
| 4 | .400 | .350 | .425 | .440 | 4 |
| 5 | .250 | .224 | .275 | .300 | 3 |
| 6 | 1.250 | 1.950 | 2.075 | 1.350 | 20 |

* For Refer to Table 1 and 2 on pages 9 and 10.

** For maximum "B" Dimension add .065 inch to the appropriate "A" Dimension.

SMPS Ceramic Capacitors - Ordering Information

P B 4 N 1 BX 475 K B

SMPS Capacitor Family

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

Case Code
(see dimension chart)

| Lead Style | | | |
|------------|----------------------|---|------------------|
| N | Straight (thru hole) | L | Leads formed out |
| J | Leads formed in | M | Without leads |

| Coating | |
|---------|----------|
| 1 | Uncoated |
| 2 | Coated |

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

Capacitance
(expressed in pf)
First two digits are significant, third digit is number of zeros.

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

| Test Level | | | |
|------------|---------------------------|---|--------------------|
| A | Electrical Screening Only | C | HiRel Group B or C |
| B | MIL-PRF-49478 Group A | X | Special Screening |

Ordering Information for DSCC Drawings 87106 & 88011

Part Identification Number 87106 - XXX - X

Drawing Number _____

Dash Number _____

Lead - N Standard - Do not specify - For J or L lead use suffix _____

Vendor CAGE Number
OYBX7

Notes:

1. Dimensions are in inches.
2. Unless otherwise specified, tolerances are ± .010 inch (0.25 mm).
3. Lead frame configuration is shown as typical above the seating plane.
4. See Table I for specific maximum A dimension. For maximum B dimension, add .065 inch (1.65 mm) to the appropriate A dimension. For all lead styles, the number of chips is determined by the capacitance and voltage rating.
5. For case code 5, dimensions shall be .100 inch (2.54 mm) maximum and .012 inch (0.30 mm) minimum.
6. Lead alignment within pin rows shall be within ± .005 inch (0.13 mm).