

# Surface Mount Common Mode Choke

NCC Series

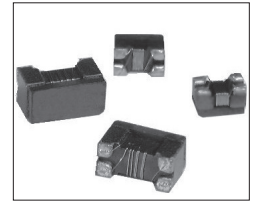
## FEATURES

- HIGH COMMON MODE IMPEDANCE AT HIGH FREQUENCY
- LOW PROFILE SURFACE MOUNT PACKAGE
- SHIELDED PROVIDING EXCELLENT NOISE SUPPRESSION
- SUITABLE FOR HIGH SPEED DIGITAL EQUIPMENT (USB/IEEE)
- Pb-FREE CONSTRUCTION
- BOTH FLOW AND REFLOW SOLDERING APPLICABLE

**RoHS  
Compliant**

includes all homogeneous materials

\*See Part Number System for Details



## CHARACTERISTICS

|                           |                                                                     |                 |
|---------------------------|---------------------------------------------------------------------|-----------------|
| Case Size                 | 0805                                                                | 1206            |
| Impedance Range           | 30~ 370 Ohms                                                        | 30 ~ 2,200 Ohms |
| Available Tolerance       | ±25%                                                                |                 |
| Temperature Range         | -40°C ~ +125°C                                                      |                 |
| Withstanding voltage      | 125VDC 30 seconds                                                   |                 |
| Insulation Resistance     | 10MΩ after application 50V for 30 seconds                           |                 |
| Resistance to Solder Heat | 260°C ±5°C for 10 seconds                                           |                 |
| Temperature Cycling       | ±25% of initial value after 10 cycles<br>(-40°C/+20°C/+125°C/+20°C) |                 |

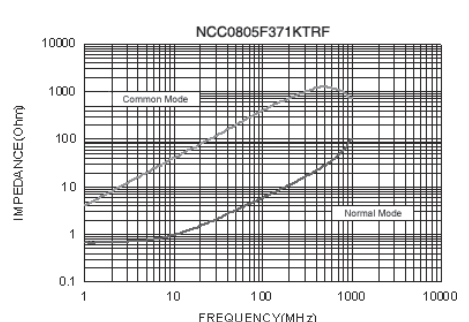
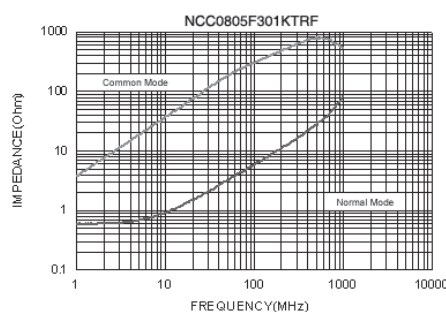
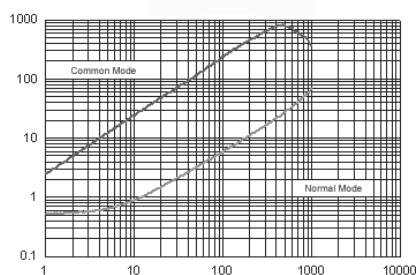
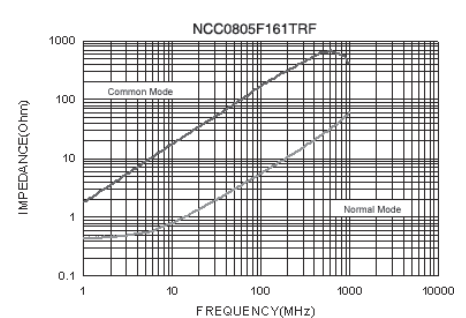
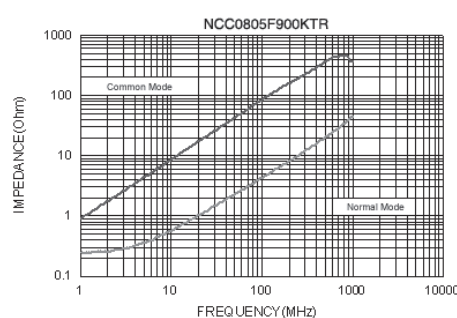
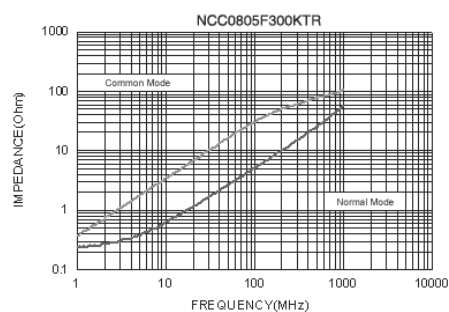
## PART NUMBER SYSTEM

NCC 0805 F 300 K TR F

Series      Case Code      Material (Ferrite)      Impedance value (ohms)      Current Rating      Tape & Reel      Pb-free/RoHS Compliant

## NCC0805 SPECIFICATIONS

| NIC Part Number | Impedance (Ω) | Test Frequency (MHz) | DC Resistance (Ω max.) | DC Current (mA max.) | Voltage Rating (Vdc) | Withstanding Voltage (Vdc) | Insulation Resistance (Ω) |
|-----------------|---------------|----------------------|------------------------|----------------------|----------------------|----------------------------|---------------------------|
| NCC0805F300KTRF | 30 ±25%       | 100                  | 0.20                   | 400                  | 50                   | 125                        | 10Meg                     |
| NCC0805F670KTRF | 67 ±25%       |                      | 0.25                   | 400                  |                      |                            |                           |
| NCC0805F900KTRF | 90 ±25%       |                      | 0.30                   | 400                  |                      |                            |                           |
| NCC0805F121KTRF | 120 ±25%      |                      | 0.30                   | 400                  |                      |                            |                           |
| NCC0805F161JTRF | 160 ±25%      |                      | 0.35                   | 350                  |                      |                            |                           |
| NCC0805F181JTRF | 180 ±25%      |                      | 0.35                   | 350                  |                      |                            |                           |
| NCC0805F221HTRF | 220 ±25%      |                      | 0.40                   | 300                  |                      |                            |                           |
| NCC0805F221MTRF | 220 ±25%      |                      | 0.40                   | 600                  |                      |                            |                           |
| NCC0805F261HTRF | 260 ±25%      |                      | 0.40                   | 300                  |                      |                            |                           |
| NCC0805F301HTRF | 300 ±25%      |                      | 0.45                   | 300                  |                      |                            |                           |
| NCC0805F361FTRF | 360 ±25%      |                      | 0.50                   | 100                  |                      |                            |                           |
| NCC0805F371FTRF | 370 ±25%      |                      | 0.50                   | 100                  |                      |                            |                           |



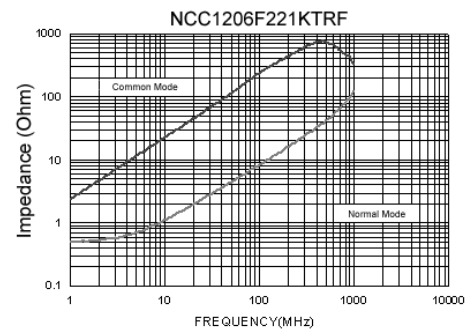
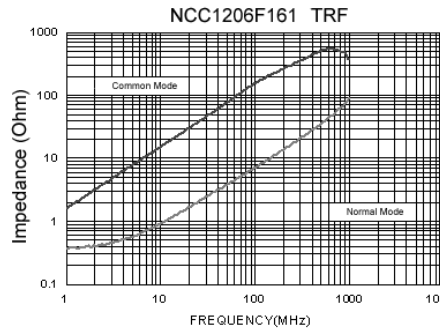
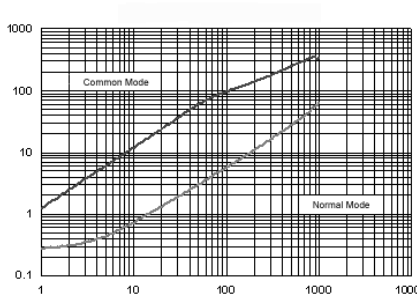
NIC COMPONENTS CORP.

www.niccomp.com

SPECIFICATIONS ARE SUBJECT TO CHANGE

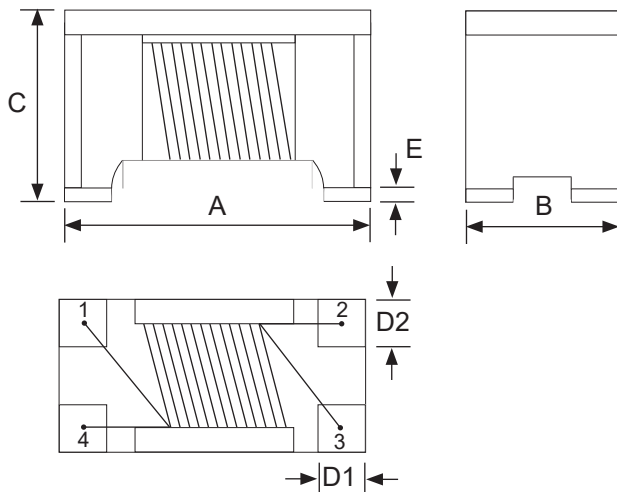
### NCC1206 SPECIFICATIONS

| NIC Part Number | Impedance ( $\Omega$ ) | Test Frequency (MHz) | DC Resistance ( $\Omega$ max.) | DC Current (mA max.) | Voltage Rating (Vdc) | Withstanding Voltage (Vdc) | Insulation Resistance ( $\Omega$ ) |
|-----------------|------------------------|----------------------|--------------------------------|----------------------|----------------------|----------------------------|------------------------------------|
| NCC1206F300KTRF | 30 $\pm$ 25%           | 100                  | 0.20                           | 400                  | 50                   | 125                        | 10Meg                              |
| NCC1206F670KTRF | 67 $\pm$ 25%           |                      | 0.30                           | 400                  |                      |                            |                                    |
| NCC1206F800KTRF | 80 $\pm$ 25%           |                      | 0.30                           | 400                  |                      |                            |                                    |
| NCC1206F900KTRF | 90 $\pm$ 25%           |                      | 0.30                           | 400                  |                      |                            |                                    |
| NCC1206F121KTRF | 120 $\pm$ 25%          |                      | 0.30                           | 400                  |                      |                            |                                    |
| NCC1206F161JTRF | 160 $\pm$ 25%          |                      | 0.35                           | 350                  |                      |                            |                                    |
| NCC1206F181JTRF | 180 $\pm$ 25%          |                      | 0.35                           | 350                  |                      |                            |                                    |
| NCC1206F221HTRF | 220 $\pm$ 25%          |                      | 0.45                           | 300                  |                      |                            |                                    |
| NCC1206F261HTRF | 260 $\pm$ 25%          |                      | 0.45                           | 300                  |                      |                            |                                    |
| NCC1206F281HTRF | 280 $\pm$ 25%          |                      | 0.45                           | 300                  |                      |                            |                                    |
| NCC1206F301HTRF | 300 $\pm$ 25%          |                      | 0.50                           | 300                  |                      |                            |                                    |
| NCC1206F361HTRF | 360 $\pm$ 25%          |                      | 0.60                           | 300                  |                      |                            |                                    |
| NCC1206F431HTRF | 430 $\pm$ 25%          |                      | 0.60                           | 300                  |                      |                            |                                    |
| NCC1206F471HTRF | 470 $\pm$ 25%          |                      | 0.70                           | 300                  |                      |                            |                                    |
| NCC1206F551HTRF | 550 $\pm$ 25%          |                      | 0.75                           | 300                  |                      |                            |                                    |
| NCC1206F601HTRF | 600 $\pm$ 25%          |                      | 0.80                           | 300                  |                      |                            |                                    |
| NCC1206F222GTRF | 2200 $\pm$ 25%         |                      | 1.20                           | 200                  |                      |                            |                                    |

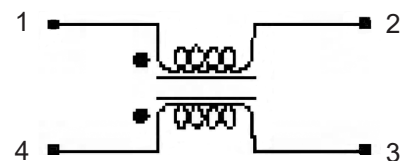


### CASE DIMENSIONS (mm)

| Type    | A $\pm$ 0.2 | B $\pm$ 0.2 | C $\pm$ 0.2 | D1 $\pm$ 0.1 | D2 $\pm$ 0.1 | E $\pm$ 0.1 |
|---------|-------------|-------------|-------------|--------------|--------------|-------------|
| NCC0805 | 2.0         | 1.2         | 1.2         | 0.55         | 0.46         | 0.15        |
| NCC1206 | 3.2         | 1.6         | 2.0         | 0.50         | 0.50         | 0.15        |

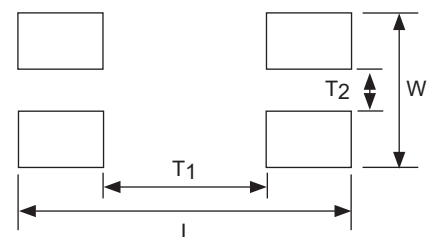


### CIRCUIT SCHEMATIC

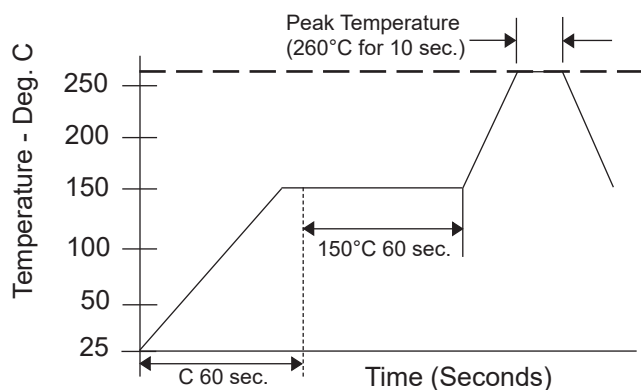


### LAND PATTERN DIMENSIONS (mm)

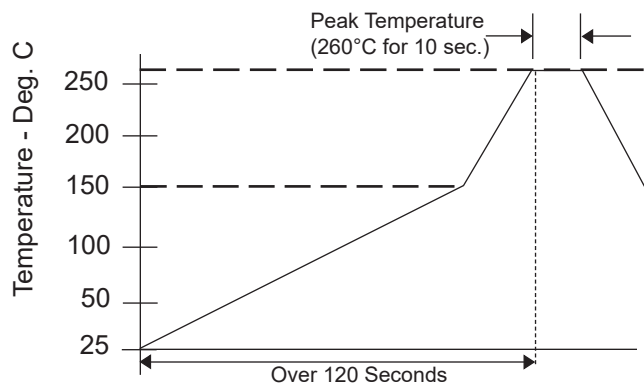
| Case Size | L    | W    | T1   | T2   |
|-----------|------|------|------|------|
| 0805      | 2.60 | 1.25 | 1.10 | 0.45 |
| 1206      | 3.70 | 1.60 | 1.90 | 0.40 |



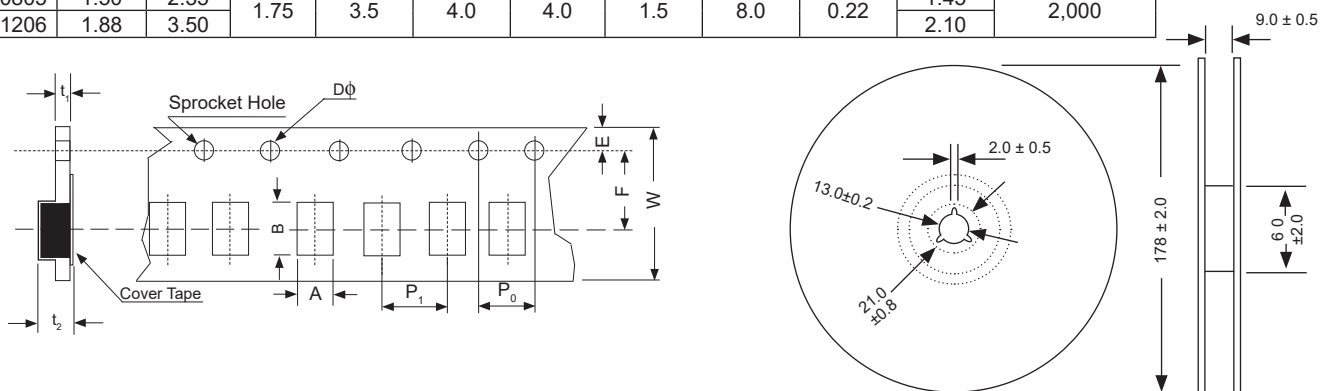
### RECOMMENDED REFLOW SOLDERING PROFILE



### RECOMMENDED FLOW SOLDERING PROFILE



| Series  | A ± 0.1 | B ± 0.1 | E ± 0.1 | F ± 0.05 | P <sub>0</sub> ± 0.1 | P <sub>1</sub> ± 0.1 | Dφ ± 0.1 | W ± 0.1 | t <sub>1</sub> ± 0.05 | t <sub>2</sub> ± 0.1 | Reel Quantity |
|---------|---------|---------|---------|----------|----------------------|----------------------|----------|---------|-----------------------|----------------------|---------------|
| NCC0805 | 1.50    | 2.35    | 1.75    | 3.5      | 4.0                  | 4.0                  | 1.5      | 8.0     | 0.22                  | 1.45                 | 2,000         |
| NCC1206 | 1.88    | 3.50    |         |          |                      |                      |          |         |                       | 2.10                 |               |



**REEL QUANTITY:** 2,000 per reel  
(0805 & 1206 case size)