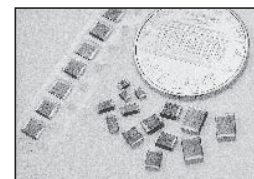


## FEATURES

- RUGGED CONSTRUCTION IN STANDARD EIA SIZES
- **AEC Q-200 QUALIFIED**
- EFFECTIVE EM/RFI SUPPRESSION UP TO 1GHz
- CURRENT RATINGS UP TO 2.2 AMPS
- SHARP AND HIGH IMPEDANCES AVAILABLE
- OPERATING TEMPERATURE RANGE: -55°C TO +125°C
- SUITABLE FOR AUTOMOTIVE EQUIPMENT\*

**RoHS Compliant**  
 includes all homogeneous materials  
 \*See Part Number System for Details

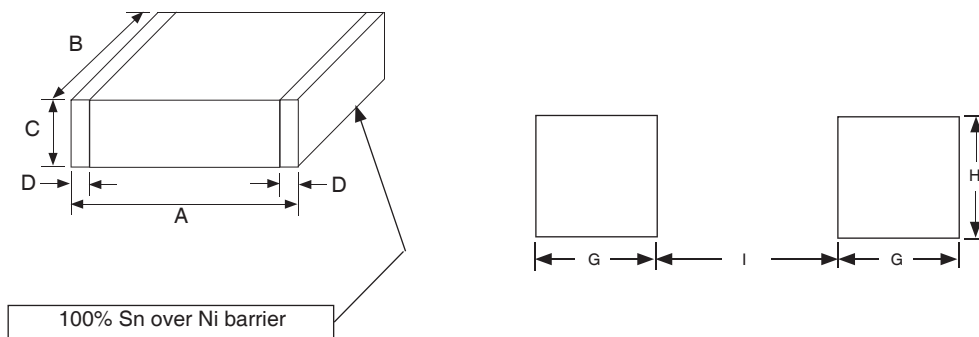


## CHARACTERISTICS

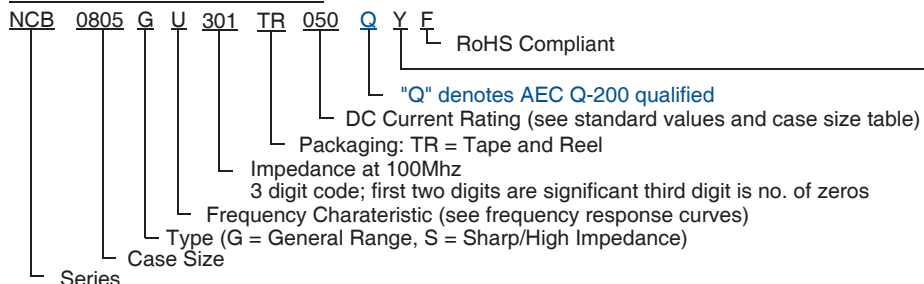
Type	General Range	Sharp High Impedances
Sizes Available	0603, 0805, 1206	0603, 0805
Impedance Range	15Ω ~ 2,000Ω	10Ω ~ 2,700Ω
Impedance Tolerance	±25% Tol.	
Operating Temperature Range	-55°C ~ +125°C	

## CASE SIZE & LAND PATTERN DIMENSIONS (mm)

EIA Size	A (mm)	B (mm)	C (mm)	D (mm)	G (mm)	H (mm)	I (mm)
0603	1.60 ± 0.15	0.80 ± 0.15	0.80 ± 0.15	0.30 ± 0.20	0.60 ~ 0.80	0.60 ~ 0.80	0.60 ~ 0.80
0805	2.0 +0.3/-0.1	1.25 ± 0.20	0.85 ± 0.20	0.50 ± 0.30	0.80 ~ 1.20	0.90 ~ 1.60	0.80 ~ 1.20
1206	3.20 ± 0.20	1.60 ± 0.20	0.85 ± 0.20	0.85 ± 0.20	1.00 ~ 1.50	1.20 ~ 2.00	1.80 ~ 2.50



## PART NUMBER SYSTEM



"Y" denotes suitable for Automotive equipment, sourced to special production and inspection at TS-16949 certified production site.



\*Suitable for automotive eEquipment, sourced to special production and inspection at TS-16949 certified production site.

## STANDARD VALUES AND CASE SIZES (mm)

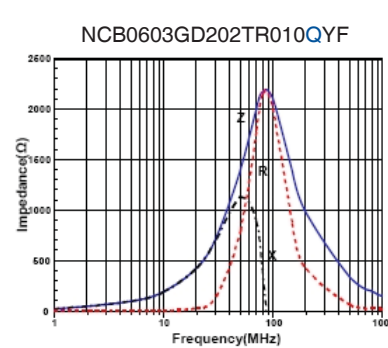
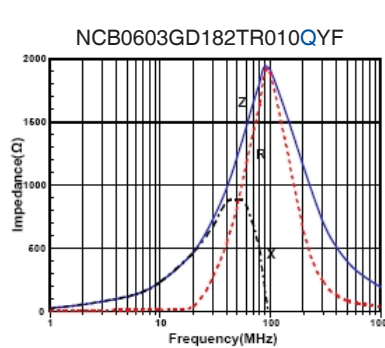
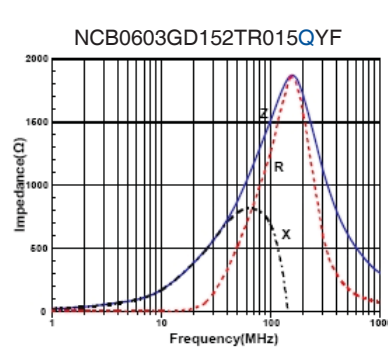
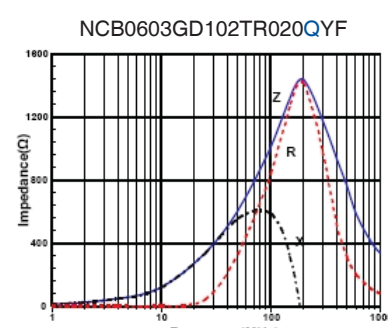
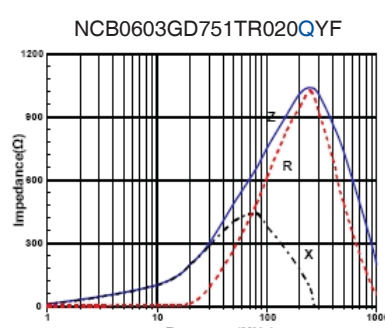
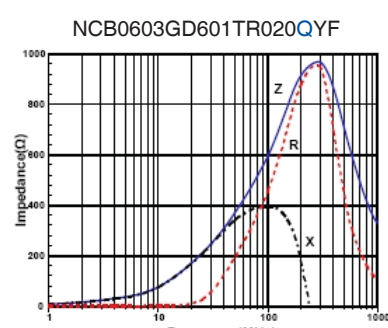
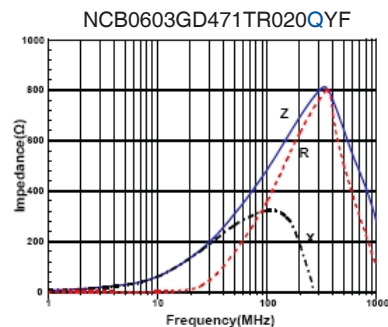
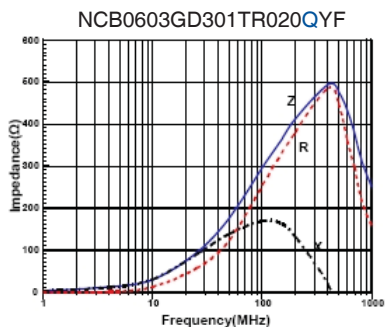
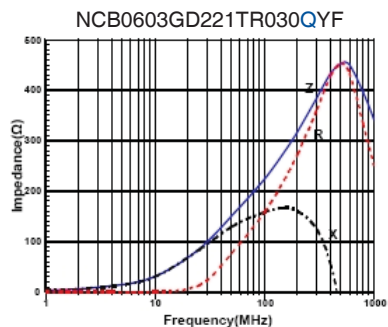
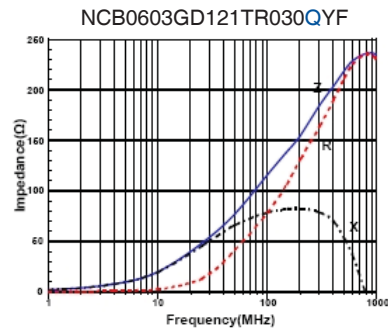
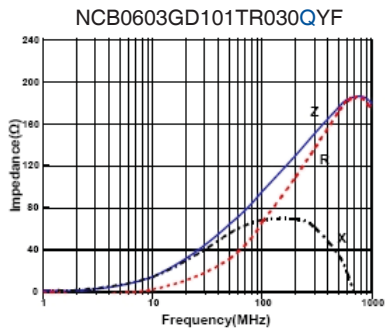
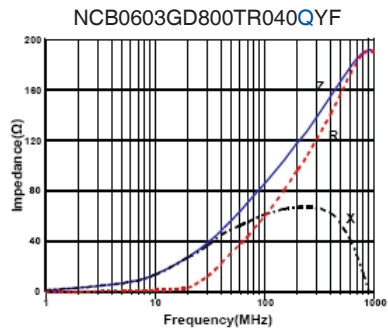
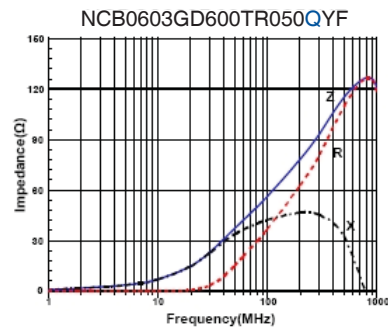
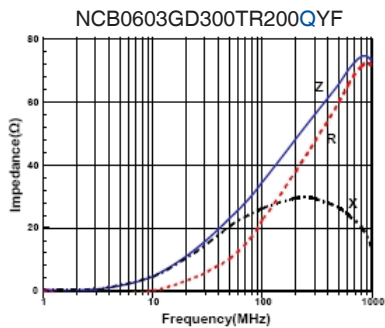
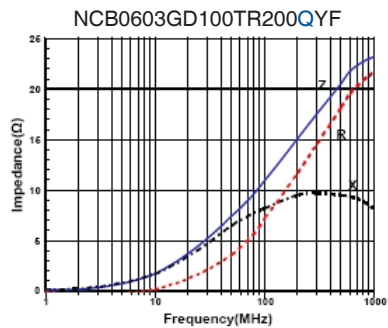
EIA Size	NIC Part Number	Impedance at 100MHz $\Omega$	DC Resistance Max. ( $\Omega$ )	DC Current Max. (mA)	A (mm)	B (mm)	C (mm)	D (mm)
0603	NCB0603GD110TR200QYF	0 ~ 15	0.05	2,000	1.60 ± 0.15	0.80 ± 0.15	0.80 ± 0.15	0.30 ± 0.20
	NCB0603GD300TR200QYF	30 ± 25%	0.05	2,000				
	NCB0603GD600TR050QYF	60 ± 25%	0.10	500				
	NCB0603GD800TR040QYF	80 ± 25%	0.15	400				
	NCB0603GD101TR030QYF	100 ± 25%	0.20	300				
	NCB0603GD121TR030QYF	120 ± 25%	0.20	300				
	NCB0603GD221TR030QYF	220 ± 25%	0.30	300				
	NCB0603GD301TR020QYF	300 ± 25%	0.35	200				
	NCB0603GD471TR020QYF	470 ± 25%	0.45	200				
	NCB0603GD601TR020QYF	600 ± 25%	0.45	200				
	NCB0603GD751TR020QYF	750 ± 25%	0.50	200				
	NCB0603GD102TR020QYF	1000 ± 25%	0.60	200				
	NCB0603GD152TR015QYF	1500 ± 25%	0.70	150				
	NCB0603GD182TR010QYF	1800 ± 25%	0.90	100				
	NCB0603GD202TR010QYF	2000 ± 25%	1.20	100				
	NCB0603GD222TR010QYF	2200 ± 25%	1.20	100				
	NCB0603GE800TR030QYF	80 ± 25%	0.15	300				
	NCB0603GE121TR030QYF	120 ± 25%	0.20	300				
	NCB0603GE181TR030QYF	180 ± 25%	0.30	300				
	NCB0603GE301TR020QYF	300 ± 25%	0.35	200				
	NCB0603GE601TR020QYF	600 ± 25%	0.45	200				
	NCB0603GE102TR020QYF	1000 ± 25%	0.60	200				
	NCB0603GE202TR010QYF	2000 ± 25%	1.00	100				
	NCB0603GU100TR200QYF	0 ~ 15	0.05	2000				
	NCB0603GU300TR200QYF	30 ± 25%	0.05	2000				
	NCB0603GU600TR050QYF	60 ± 25%	0.10	500				
NCB0603GU121TR030QYF	120 ± 25%	0.20	300					
NCB0603GU221TR030QYF	220 ± 25%	0.30	300					
NCB0603GU301TR020QYF	300 ± 25%	0.35	200					
NCB0603GU471TR020QYF	470 ± 25%	0.40	200					
NCB0603GU601TR020QYF	600 ± 25%	0.50	200					
NCB0603GU102TR020QYF	1000 ± 25%	0.60	200					
0805	NCB0805GD070TR200QYF	0 ~ 15	0.04	2000	2.0 +0.3/-0.1	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
	NCB0805GD190TR200QYF	19 ± 25%	0.04	2000				
	NCB0805GD300TR150QYF	30 ± 25%	0.05	1500				
	NCB0805GD800TR100QYF	80 ± 25%	0.10	1000				
	NCB0805GD121TR080QYF	120 ± 25%	0.15	800				
	NCB0805GD181TR070QYF	180 ± 25%	0.18	700				
	NCB0805GD221TR060QYF	220 ± 25%	0.20	600				
	NCB0805GD301TR050QYF	300 ± 25%	0.20	500				
	NCB0805GD421TR050QYF	420 ± 25%	0.30	500				
	NCB0805GD501TR050QYF	500 ± 25%	0.30	500				
	NCB0805GD601TR050QYF	600 ± 25%	0.30	500				
	NCB0805GD751TR050QYF	750 ± 25%	0.35	500				
	NCB0805GD102TR050QYF	1000 ± 25%	0.35	500				
	NCB0805GD152TR050QYF	1500 ± 25%	0.40	500				
	NCB0805GD202TR050QYF	2000 ± 25%	0.50	500				
	NCB0805GE800TR100QYF	80 ± 25%	0.10	1000				
	NCB0805GE121TR080QYF	120 ± 25%	0.15	800				



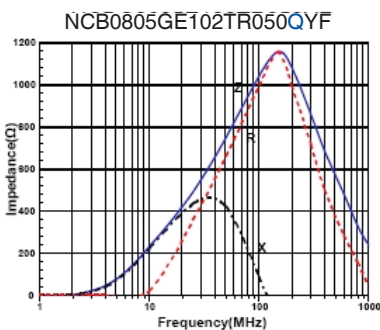
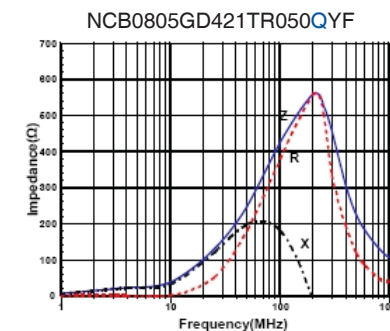
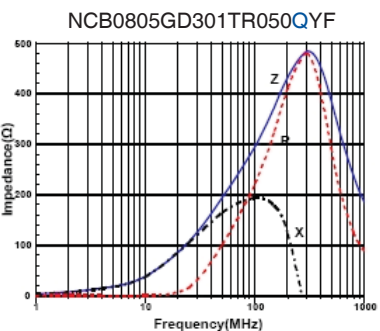
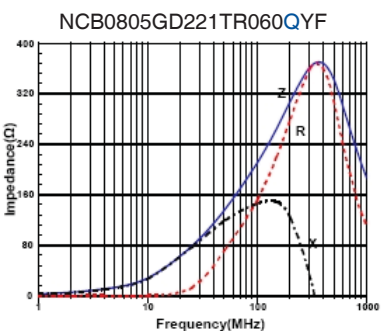
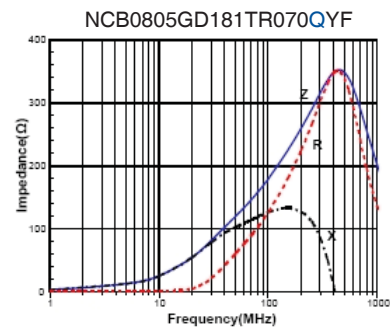
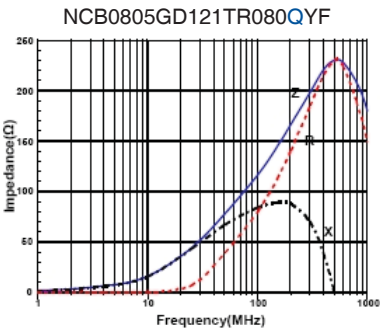
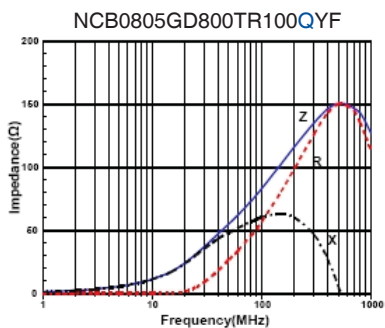
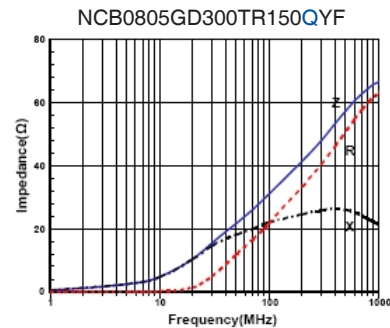
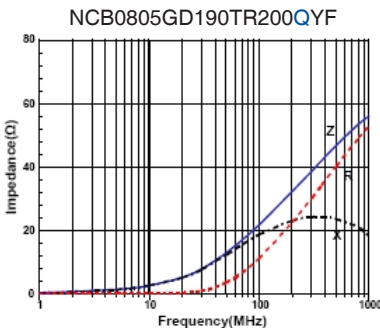
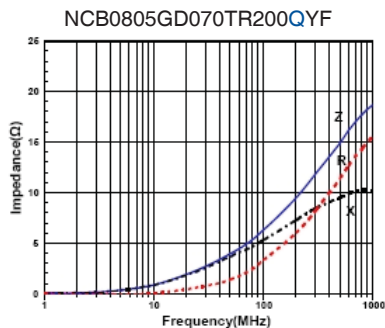
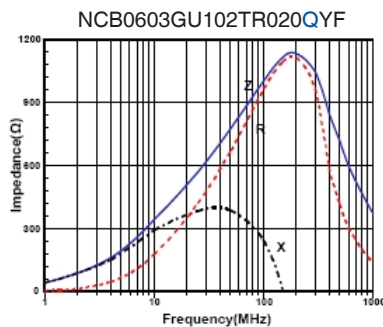
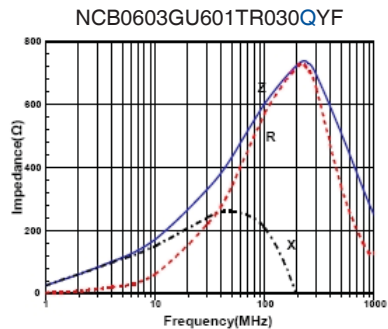
## STANDARD VALUES AND CASE SIZES (mm)

EIA Size	NIC Part Number	Impedance at 100MHz $\Omega$ ( $\pm 25\%$ Tol.)	DC Resistance Max. ( $\Omega$ )	DC Current Max. (mA)	A (mm)	B (mm)	C (mm)	D (mm)
0805	NCB0805GE181TR060QYF	180 $\pm$ 25%	0.20	600	2.0 +0.3/-0.1	1.25 $\pm$ 0.2	0.85 $\pm$ 0.2	0.5 $\pm$ 0.3
	NCB0805GE301TR050QYF	300 $\pm$ 25%	0.20	500				
	NCB0805GE501TR050QYF	500 $\pm$ 25%	0.30	500				
	NCB0805GE601TR050QYF	600 $\pm$ 25%	0.30	500				
	NCB0805GE102TR050QYF	1000 $\pm$ 25%	0.35	500				
	NCB0805GU100TR220QYF	0 ~ 15	0.04	2200				
	NCB0805GU170TR200QYF	17 $\pm$ 25%	0.04	2000				
	NCB0805GU300TR150QYF	30 $\pm$ 25%	0.05	1500				
	NCB0805GU470TR150QYF	47 $\pm$ 25%	0.05	1500				
	NCB0805GU700TR100QYF	70 $\pm$ 25%	0.10	1000				
	NCB0805GU121TR080QYF	120 $\pm$ 25%	0.15	800				
	NCB0805GU221TR060QYF	220 $\pm$ 25%	0.20	600				
	NCB0805GU301TR050QYF	300 $\pm$ 25%	0.20	500				
	NCB0805GU421TR050QYF	420 $\pm$ 25%	0.25	500				
NCB0805GU601TR050QYF	600 $\pm$ 25%	0.30	500					
NCB0805GU102TR050QYF	1000 $\pm$ 25%	0.40	500					
1206	NCB1206GD000TR220QYF	0 ~ 15	0.03	2200	3.2 $\pm$ 0.20	1.6 $\pm$ 0.20	0.85 $\pm$ 0.2	0.85 $\pm$ 0.2
	NCB1206GD310TR200QYF	31 $\pm$ 25%	0.05	2000				
	NCB1206GD600TR100QYF	60 $\pm$ 25%	0.10	1000				
	NCB1206GD800TR100QYF	80 $\pm$ 25%	0.10	1000				
	NCB1206GD121TR100QYF	120 $\pm$ 25%	0.10	1000				
	NCB1206GD221TR060QYF	220 $\pm$ 25%	0.20	600				
	NCB1206GD301TR060QYF	300 $\pm$ 25%	0.20	600				
	NCB1206GD501TR060QYF	500 $\pm$ 25%	0.30	600				
	NCB1206GD601TR060QYF	600 $\pm$ 25%	0.30	600				
	NCB1206GD102TR050QYF	1000 $\pm$ 25%	0.60	500				
	NCB1206GD122TR030QYF	1200 $\pm$ 25%	0.60	300				
	NCB1206GU310TR200QYF	31 $\pm$ 25%	0.05	2000				
	NCB1206GU700TR100QYF	70 $\pm$ 25%	0.10	1000				
	NCB1206GU301TR060QYF	300 $\pm$ 25%	0.20	600				
NCB1206GU601TR060QYF	600 $\pm$ 25%	0.30	600					

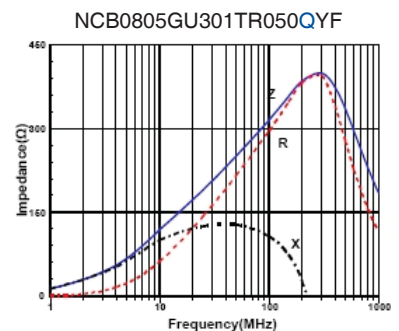
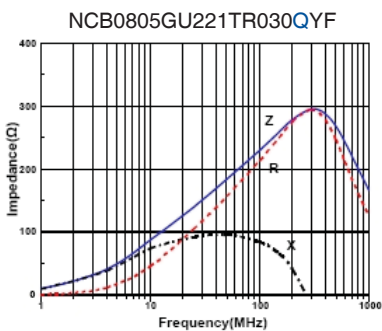
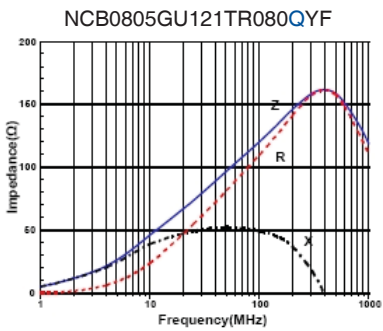
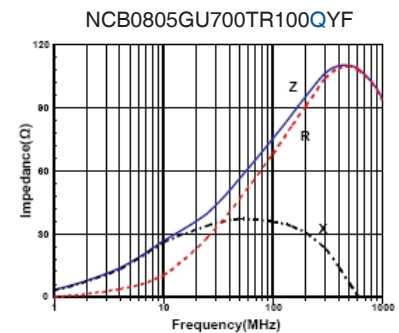
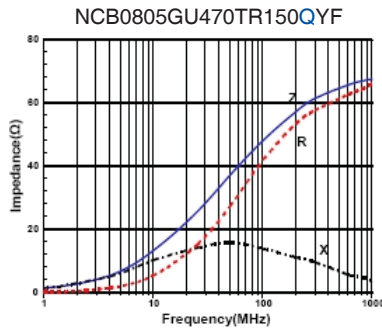
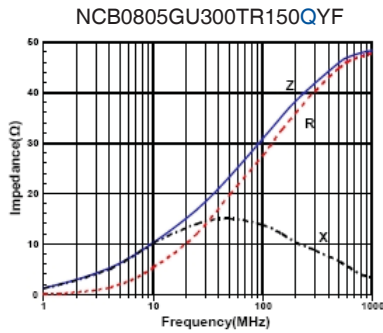
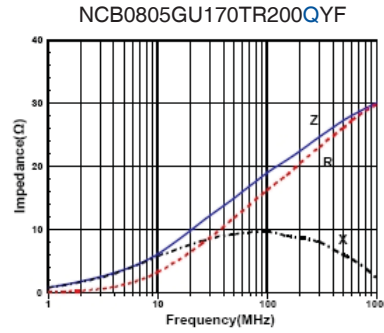
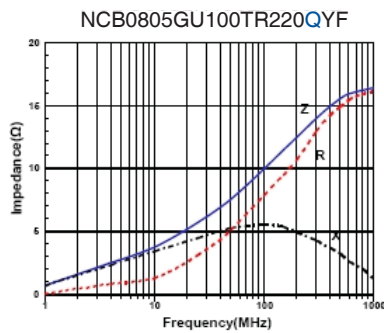
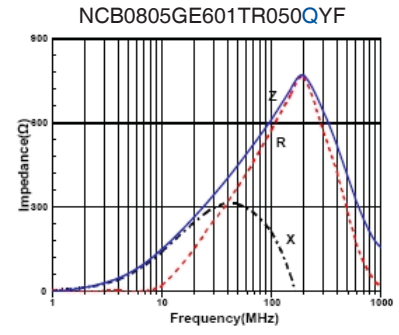
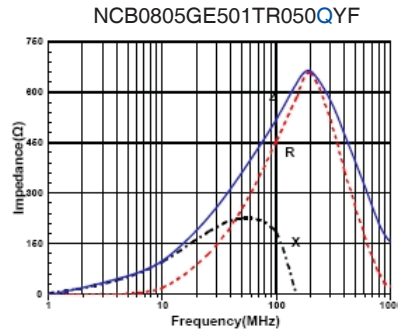
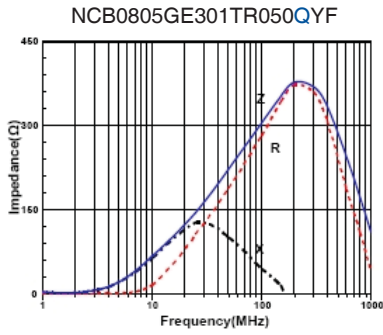






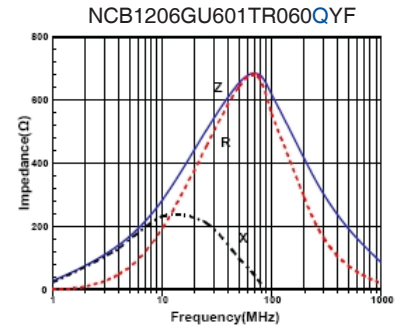
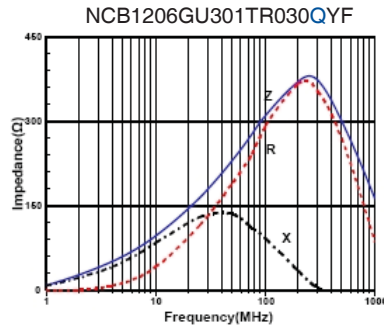
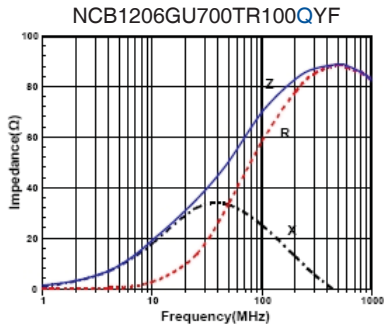








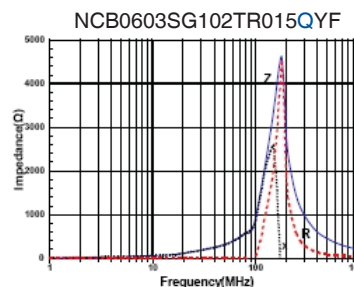
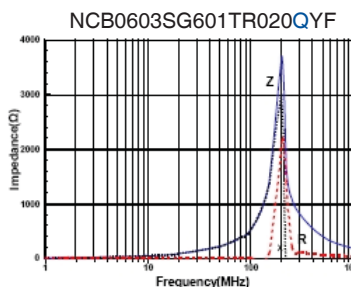
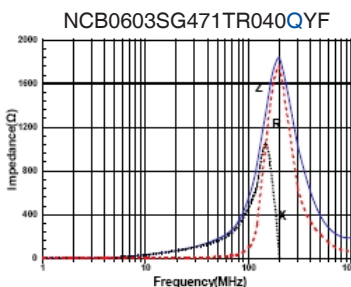
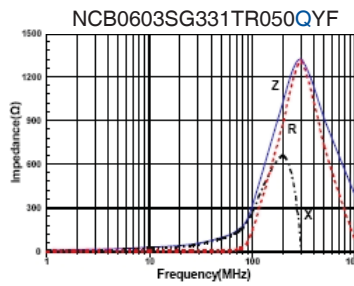
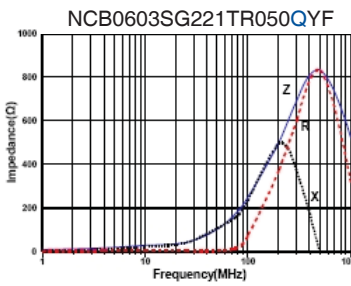
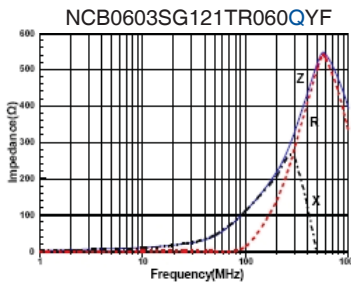
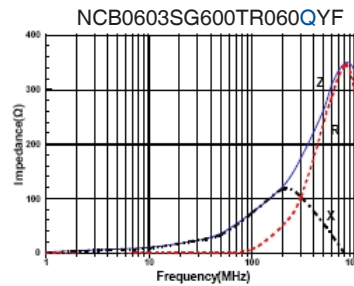
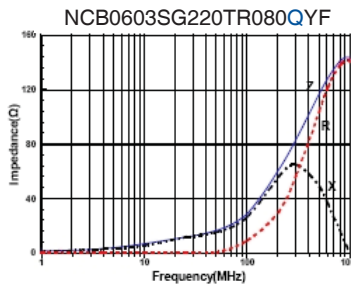
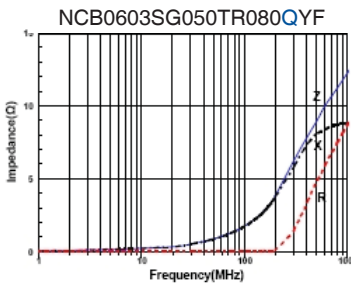
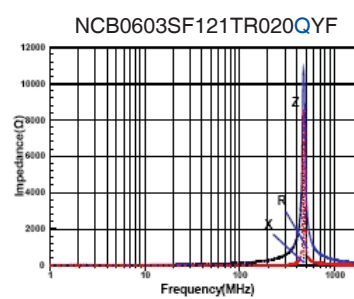
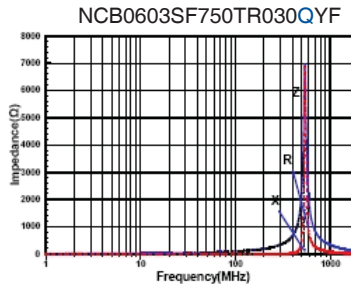
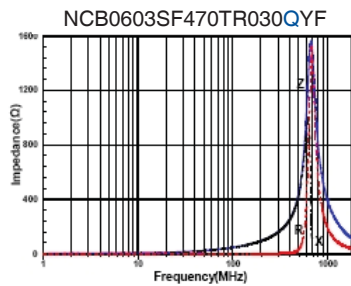
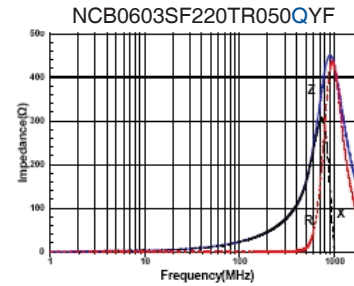
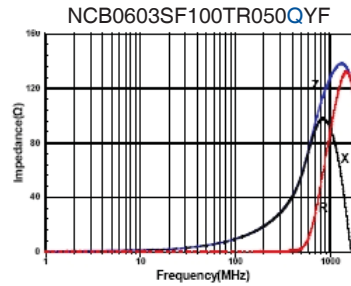
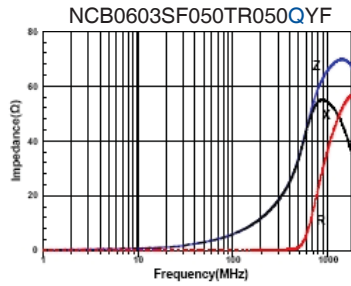




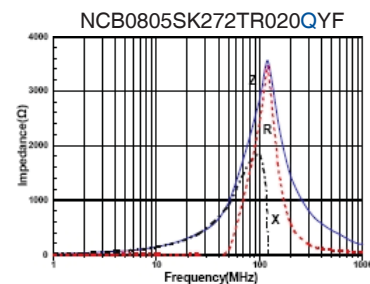
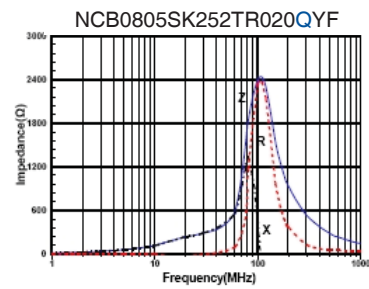
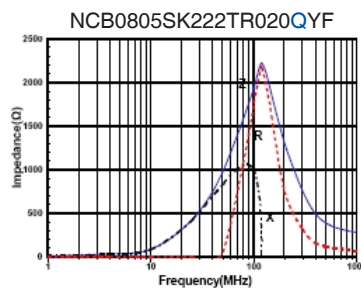
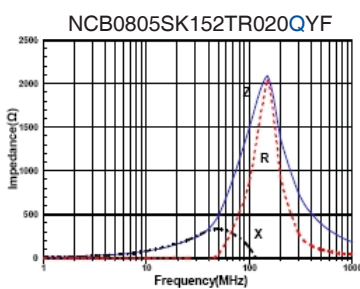
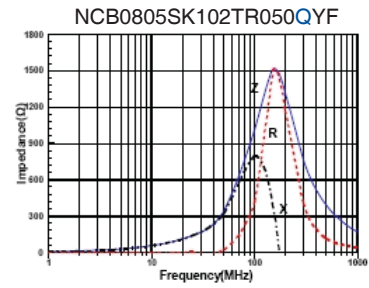
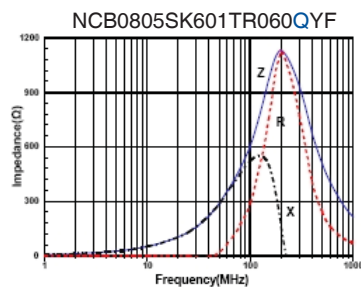
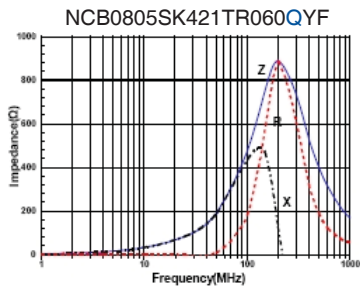
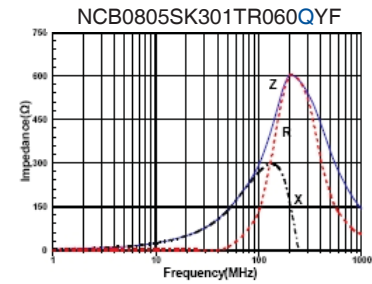
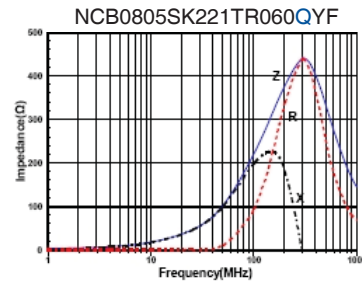
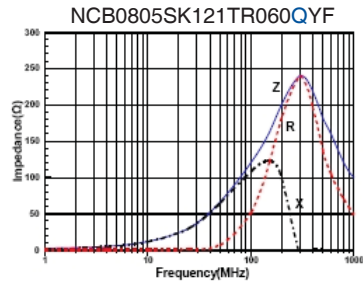
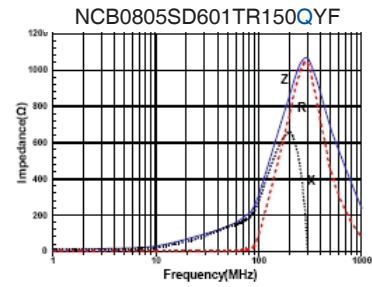
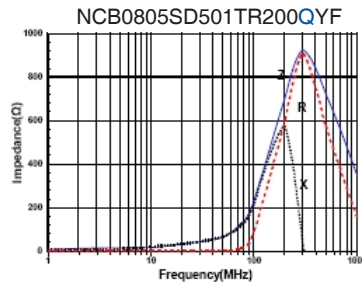
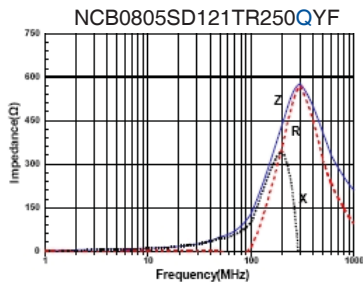
## STANDARD VALUES AND CASE SIZES (mm)

EIA Size	NIC Part Number	Impedance at 100MHz $\Omega$	DC Resistance Max. ( $\Omega$ )	DC Current Max. (mA)	A (mm)	B (mm)	C (mm)	D (mm)
0603	NCB0603SQYF050TR050QYF	0 ~ 10	0.20	500	1.60 ± 0.15	0.80 ± 0.15	0.80 ± 0.15	0.30 ± 0.20
	NCB0603SQYF100TR050QYF	5 ~ 15	0.25	500				
	NCB0603SQYF220TR050QYF	22 ± 25%	0.35	500				
	NCB0603SQYF470TR030QYF	47 ± 25%	0.55	300				
	NCB0603SQYF750TR030QYF	75 ± 25%	0.70	300				
	NCB0603SQYF121TR020QYF	120 ± 25%	0.90	200				
	NCB0603SG050TR080QYF	0 ~ 15	0.10	800				
	NCB0603SG220TR080QYF	22 ± 25%	0.20	800				
	NCB0603SG600TR060QYF	60 ± 25%	0.30	600				
	NCB0603SG121TR060QYF	120 ± 25%	0.45	600				
	NCB0603SG221TR050QYF	220 ± 25%	0.55	500				
	NCB0603SG331TR050QYF	330 ± 25%	0.70	500				
	NCB0603SG471TR040QYF	470 ± 25%	0.80	400				
	NCB0603SG601TR020QYF	600 ± 25%	1.10	200				
	NCB0603SG102TR015QYF	1000 ± 25%	1.20	150				
	NCB0603SK221TR050QYF	220 ± 25%	0.45	500				
	NCB0603SK331TR050QYF	330 ± 25%	0.50	500				
	NCB0603SK421TR040QYF	420 ± 25%	0.55	400				
	NCB0603SK471TR040QYF	470 ± 25%	0.55	400				
	NCB0603SK601TR020QYF	600 ± 25%	0.60	200				
NCB0603SK102TR020QYF	1000 ± 25%	0.80	200					
NCB0603SK152TR020QYF	1500 ± 25%	0.80	200					
NCB0603SK202TR020QYF	2000 ± 25%	1.00	200					
NCB0603SK222TR020QYF	2200 ± 25%	1.00	200					
NCB0603SK252TR020QYF	2500 ± 25%	1.20	200					
NCB0603SK272TR020QYF	2700 ± 25%	1.40	200					
0805	NCB0805SG050TR100QYF	0 ~ 15	0.07	1000	2.0 +0.3/-0.1	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
	NCB0805SG300TR100QYF	30 ± 25%	0.10	1000				
	NCB0805SG600TR080QYF	60 ± 25%	0.20	800				
	NCB0805SG121TR060QYF	120 ± 25%	0.25	600				
	NCB0805SG221TR060QYF	220 ± 25%	0.30	600				
	NCB0805SG301TR060QYF	300 ± 25%	0.40	600				
	NCB0805SG421TR060QYF	420 ± 25%	0.40	600				
	NCB0805SG601TR060QYF	600 ± 25%	0.45	600				
	NCB0805SG102TR050QYF	1000 ± 25%	0.50	500				
	NCB0805SK121TR060QYF	120 ± 25%	0.20	600				
	NCB0805SK221TR060QYF	220 ± 25%	0.25	600				
	NCB0805SK301TR060QYF	300 ± 25%	0.30	600				
	NCB0805SK421TR060QYF	420 ± 25%	0.30	600				
	NCB0805SK601TR060QYF	600 ± 25%	0.35	600				
	NCB0805SK102TR050QYF	1000 ± 25%	0.40	500				
	NCB0805SK152TR020QYF	1500 ± 25%	0.45	200				
	NCB0805SK222TR020QYF	2200 ± 25%	0.60	200				
	NCB0805SK252TR020QYF	2500 ± 25%	0.70	200				
NCB0805SK272TR020QYF	2700 ± 25%	0.80	200					

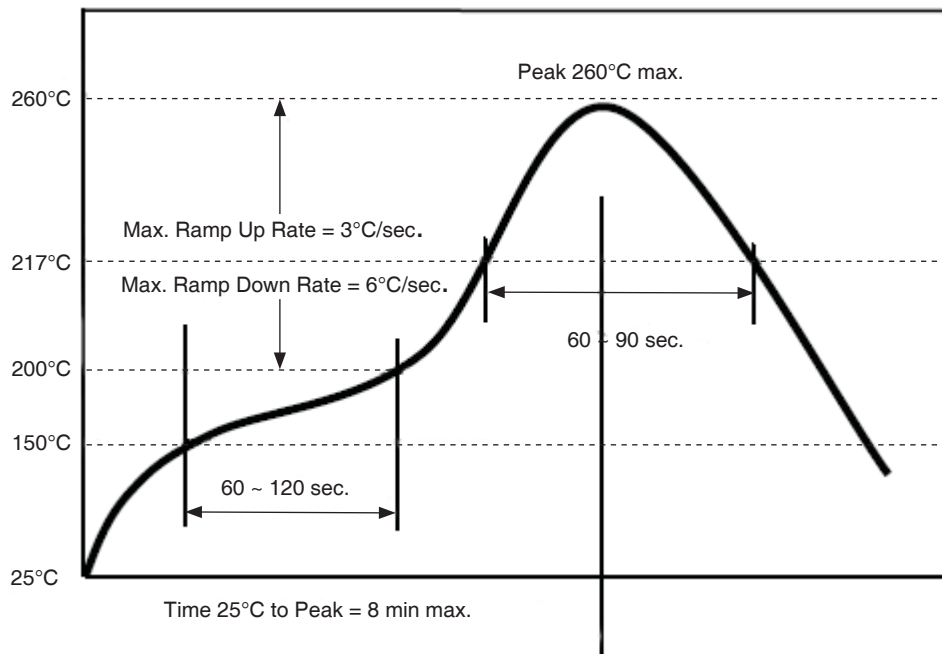








## REFLOW SOLDERING PROFILE



### NCB LAND PATTERN DIMENSIONS (mm)

Size	A	B	C
0603	0.60 ~ 0.80	0.60 ~ 0.80	0.60 ~ 0.80
0805	0.80 ~ 1.20	0.90 ~ 1.60	0.80 ~ 1.20
1206	1.00 ~ 1.50	1.20 ~ 2.00	1.80 ~ 2.50

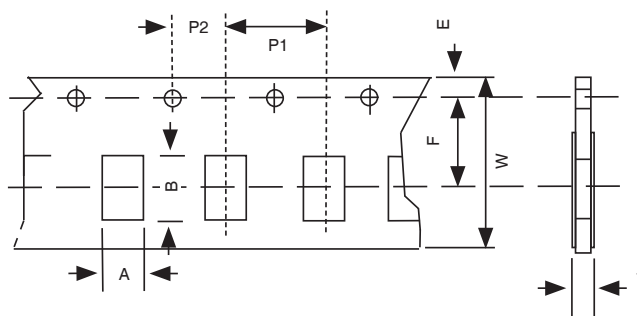




## TAPE DIMENSIONS (mm)

Dimensions	NCB0603_QYF	NCB0805_QYF
A	1.00 ± 0.2	1.50 ± 0.2
B	1.80 ± 0.2	2.30 ± 0.2
T	1.10 max.	1.10 max.
W	8.0 ± 0.3	
E	1.75 ± 0.1	
F	3.5 ± 0.05	
P1	4.0 ± 0.1	
P2	2.0 ± 0.1	
Chips/Reel	4,000	4,000
Fig.	1	1

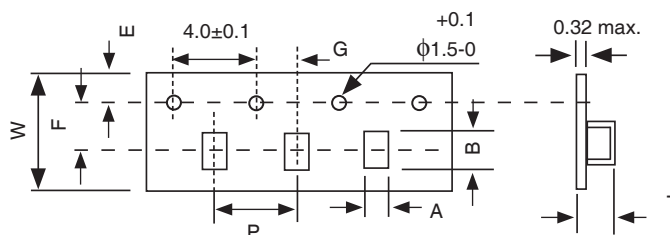
FIGURE 1 (PRESSED PAPER CARRIER)



## TAPE DIMENSIONS (mm)

Dimensions	NCB1206P_QY
A	1.88 ± 0.3
B	3.5 ± 0.3
T	1.27 max.
W	8.0 ± 0.3
E	1.75 ± 0.1
F	3.5 ± 0.05
P	4.0 ± 0.1
Chips/Reel	3,000
Fig.	2

FIGURE 2 (EMBOSSED PLASTIC CARRIER)



## REEL DIMENSIONS

Case Size	REEL DIMENSIONS (mm)				
	A	B	C	D	E
0603					
0805	178 ± 2.0	58 ± 2.0	10 ± 1.5	13.5 ± 0.2	2.45 ± 0.2
1206					

