

Cat. No.	Case Size	Type	( $\mu$ F)	Tol	Net Price*
<b>50 VDC</b>					
NMC0603NPO220J50TRPF	0603	NPO	22pF	$\pm 5\%$	<b>\$10.91</b>
NMC0603NPO330J50TRPF	0603	NPO	33pF	$\pm 5\%$	<b>10.91</b>
NMC0603NPO470J50TRPF	0603	NPO	47pF	$\pm 5\%$	<b>10.91</b>
NMC0603NPO101J50TRPF	0603	NPO	100pF	$\pm 5\%$	<b>10.91</b>
NMC0603NPO221J50TRPF	0603	NPO	220pF	$\pm 5\%$	<b>15.28</b>
NMC0603NPO471J50TRPF	0603	NPO	470pF	$\pm 5\%$	<b>26.19</b>
NMC0603X7R102K50TRPF	0603	X7R	1000pF	$\pm 10\%$	<b>10.04</b>
NMC0603NPO102J50TRPF	0603	NPO	1000pF	$\pm 5\%$	<b>32.73</b>
NMC0603X7R472K50TRPF	0603	X7R	4700pF	$\pm 10\%$	<b>13.09</b>
NMC0603X7R103K50TRPF	0603	X7R	.01 $\mu$ F	$\pm 10\%$	<b>10.04</b>
NMC0805NPO101J50TRPF	0805	NPO	100pF	$\pm 5\%$	<b>17.46</b>
NMC0805X7R102K50TRPF	0805	X7R	1000pF	$\pm 10\%$	<b>17.46</b>
NMC0805NPO102J50TRPF	0805	NPO	1000pF	$\pm 5\%$	<b>39.28</b>
NMC0805X7R103K50TRPF	0805	X7R	.01 $\mu$ F	$\pm 10\%$	<b>17.46</b>
NMC0805X7R104K50TRPF	0805	X7R	.1 $\mu$ F	$\pm 10\%$	<b>21.82</b>
NMC1206X7R103K50TRPF	1206	X7R	.01 $\mu$ F	$\pm 10\%$	<b>39.28</b>
NMC1206X7R104K50TRPF	1206	X7R	.1 $\mu$ F	$\pm 10\%$	<b>39.28</b>

\*Net Price per 1000.

## NIC THIN FILM SMT RESISTORS

**FEATURES:** Precise tolerance and temperature coefficient. EIA standard case sizes 0402-2512. Low noise. Reflow solderable (Pb free termination finish). Sold in reels: 0402 = 10000 and 0603 to 1206 = 5000. **SPECIFICATIONS: Tolerance:** T = .01%, A = .05%, B = .1%, C = .25%, D = .5%, F = 1%. **TC:** S = 5PPM, B = 10PPM, N = 15PPM, C = 25PPM, D = 50PPM. Resistance values based on E24/E96 Decade Values.

Cat. No.	Case Size	Wattage	Res. Range	TC (PPM)	Net Price Per 1000
<b>TOLERANCE: <math>\pm 1\%</math></b>					
NTR04BXXXCTRF	0402	1/16	10-100K	25	<b>\$897.83</b>
NTR06BXXXCTRF	0603	1/16	4.7-332K	25	<b>748.19</b>
NTR10BXXXCTRF	0805	1/10	1.0-1.0M	25	<b>847.95</b>
NTR12BXXXCTRF	1206	1/8	1.0-1.0M	25	<b>1067.42</b>

**NOTE:** RoHS Compliant

## NIC CURRENT SENSING RESISTORS

**FEATURES:** Precise tolerance and temperature coefficient. EIA standard case sizes 0402-2512. Reflow solderable (Pb free termination finish). Sold in reels: 0402 = 10000 and 0603 to 1206 = 5000. **SPECIFICATIONS: Tolerance:** J = 5%, F = 1%. **TC:** E = 100PPM, K = 150PPM, G = 300PPM, H = 400PPM, J = 600PPM.

Cat. No.	Case Size	Wattage	Res. Range	TC (PPM)
<b>TOLERANCE: 1%, 5%</b>				
NCST04XRESYTRF	0402	1/16	0.051 to 1R	200-400
NCST06XRESYTRF	0603	1/10	0.02 to 1R	200-600
NCST10TXRESYTRF	0805	1/8	0.02 to 1R	200-600
NCST12XRESYTRF	1206	1/4	0.01 to 1R	100-600
NCST50XRESYTRF	2010	1/2	0.01 to 1R	100-600
NCST100XRESYTRF	2512	1.0	0.01 to 1R	100-600
NCST100XRESYTRF	2512	1.0	.005 to .01	50-150

**NOTE:** RoHS Compliant. X = Tolerance (F or J), RES = Resistance, Y = TC Code. For a full listing of resistance values please refer to the Electro Sonic Web-site [www.e-sonic.com](http://www.e-sonic.com) or contact your sales representative.

## NIC FERRITE CHIP BEADS

**FEATURES:** Rugged construction in standard EIA sizes. Effective EMC/RFI suppression up to 1 GHz. Current ratings up to 500mA. High impedance over a wide frequency range. Flow and reflow soldering applications. **Operating temperature range:** -40°C to +125°C. Sold in full reels.

Cat. No.	Case Size	Impedance Range @ 100MHz	Tol. Range	Net Price Per 1000
NCB0402PXXXTRF	0402	6.0-600	$\pm 25\%$	<b>\$39.28</b>
NCB0603RXXXTRF	0603	30-1500	$\pm 25\%$	<b>39.28</b>
NCB0805AXXXTRF	0805	30-2200	$\pm 25\%$	<b>34.92</b>
NCB1206EXXXTRF	1206	19-2000	$\pm 25\%$	<b>39.28</b>
NCB1206EXXXTRF	1206	60-70	$\pm 25\%$	<b>61.10</b>
NCB1210CXXXTRF	1210	32-2000	$\pm 25\%$	<b>56.74</b>
NCB1806EXXXTRF	1806	60-150	$\pm 25\%$	<b>99.76</b>
NCB1812DXXXTRF	1812	70-120	$\pm 25\%$	<b>139.66</b>

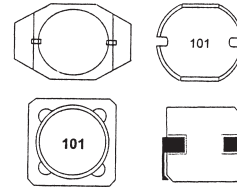
**NOTE:** RoHS Compliant. For current ratings please refer to the Electro Sonic Web-site [www.e-sonic.com](http://www.e-sonic.com) or contact your sales representative. High current NCB-H series also available.

## NIC HIGH CURRENT FERRITE CHIP BEADS

**FEATURES:** Rugged construction in standard EIA sizes. Effective EMC/RFI suppression up to 1 GHz. Current rating up to 6A. High impedance over a wide frequency range. Flow and reflow soldering applications. **Operating temperature range:** -40°C to +125°C. Sold in full reels.

Cat. No.	Case Size	Impedance Range @ 100 MHz	Res. Range	Net Price
NCB-H0603RXXXTRF	0603	10-600	$\pm 25\%$	<b>\$43.65</b>
NCB-H0805AXXXTRF	0805	30-600	$\pm 25\%$	<b>39.28</b>
NCB-H1206BXXXTRF	1206	32-600	$\pm 25\%$	<b>43.65</b>
NCB-H1806EXXXTRF	1806	60-80	$\pm 25\%$	<b>139.66</b>
NCB-H1812DXXXTRF	1812	80-1300	$\pm 25\%$	<b>139.66</b>

**NOTE:** RoHS Compliant. For current ratings please refer to the Electro Sonic Web-site [www.e-sonic.com](http://www.e-sonic.com) or contact your sales representative.

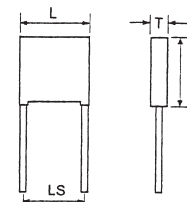


## NIC SMT POWER INDUCTORS

NIC Components NPI and NPIS Series of surface mount power inductors offer the design engineer a wide selection of inductance values, current ratings and sizes.

Cat. No.	Inductance Range $\mu$ H	Dimensions L x W x H	Reel Size	Net Price
NPI32CXXXMTRF	1.0-470	3.5 x 3.0 x 2.1	3000	<b>\$.19</b>
NPI43CXXXMTRF	1.0-560	4.5 x 4.0 x 3.2	2000	<b>.19</b>
NP152CXXXMTRF	1.0-560	5.8 x 5.2 x 2.0	3000	<b>.20</b>
NP154CXXXMTRF	10-220	5.8 x 5.2 x 4.5	1500	<b>.20</b>
NP173CXXXMTRF	10-330	7.8 x 7.0 x 3.5	1000	<b>.23</b>
NPI75CXXXMTRF	10-475	7.8 x 7.0 x 5.0	1000	<b>.23</b>
NPI104CXXXMTRF	10-560	10.0 x 9.0 x 4.0	800	<b>.26</b>
NP1105CXXXMTRF	10-820	10.0 x 9.0 x 5.4	800	<b>.26</b>
NP117LXXXMTRF	1.2-330	5.5 x 6.6 x 1.2	1000	<b>.26</b>
NP131PXXXMTRF	0.33-10	13.5 x 9.91 x 6.35	600	<b>.40</b>
NP152PXXXMTRF	0.78-15	22.35 x 16.25 x 8.0	250	<b>.54</b>
NP116WXXXMTRF	1.0-1000	4.45 x 6.6 x 2.92	2500	<b>.65</b>
NP122WXXXMTRF	3.3-330	8.0 x 10.5 x 5.0	1000	<b>.58</b>
NP130WXXXMTRF	10-1000	10.0 x 12.7 x 3.0	1000	<b>.43</b>
NP131WXXXMTRF	1.0-1000	10.0 x 12.7 x 5.0	500	<b>.40</b>
NP134WXXXMTRF	10-1000	10.0 x 12.7 x 11.0	225	<b>.54</b>
NP152WXXXMTRF	1.0-1000	15.0 x 18.4 x 7.0	250	<b>.72</b>
NP152DXXXMTRF	10-180	4.8 x 4.8 x 2.0	4000	<b>.43</b>
NP154DXXXMTRF	1.2-180	4.8 x 4.8 x 3.0	2500	<b>.43</b>
NP155DXXXMTRF	4.1-100	6.5 x 6.5 x 2.0	4000	<b>.47</b>
NP153DXXXMTRF	2.6-100	5.6 x 5.6 x 3.0	2500	<b>.47</b>
NP156DXXXMTRF	3.0-100	6.6 x 6.6 x 3.0	1500	<b>.54</b>
NP1564DXXXMTRF	3.3-100	6.6 x 6.6 x 4.0	1000	<b>.54</b>
NP1524HXXXMTRF	3.3-330	12.5 x 12.5 x 5.0	600	<b>.43</b>
NP1525HXXXMTRF	1.5-1000	12.5 x 12.5 x 8.0	400	<b>.43</b>
NP1527HXXXMTRF	1.2-1000	12.5 x 12.5 x 8.0	400	<b>.43</b>
NP1523PXXXMTRF	0.1-10	13.6 x 12.9 x 3.5	600	<b>.72</b>
NP1516RXXXMTRF	1.0-10000	4.45 x 6.6 x 2.92	2500	<b>.89</b>
NP1522RXXXMTRF	2.2-1000	8.0 x 10.5 x 5.0	1000	<b>.72</b>
NP1530RXXXMTRF	2.2-470	10.0 x 12.7 x 3.0	1000	<b>.65</b>
NP1531RXXXMTRF	1.0-390	10.0 x 12.7 x 5.0	500	<b>.58</b>
NP1552RXXXMTRF	10-1000	15.0 x 18.4 x 7.0	250	<b>.86</b>

**NOTE:** RoHS Compliant. Replace XXX in Cat. No. with inductor value.

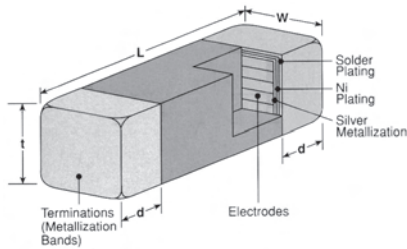
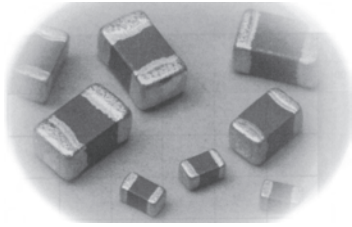


## NIC X2 NPX SERIES FILM CAPACITORS

**FEATURES:** UL, CSA, VDE, SEMKO, NEMKO, DEMKO, FEMKO and CE Approvals for across the line applications. Non-inductive and self-healing construction. **SPECIFICATIONS: Voltage:** 275 VAC. **Tolerance:**  $\pm 10\%$ . **Operating temperature range:** -40°C to +100°C. **Dielectric strength:** 2000VDC for 1 second.

Cat. No.	Capacitance ( $\mu$ F)	Dimensions (mm) L x T x H x LS	Net Price
NPX104K275VX2F	0.1	18 x 6 x 12 x 15	<b>\$.24</b>
NPX224K275VX2F	0.22	26.5 x 7.0 x 16.5 x 22.5	<b>.43</b>
NPX474K275VX2F	0.47	32.0 x 11.0 x 20.0 x 27.5	<b>.83</b>
NPX105K275VX2F	1.0	32.5 x 16.0 x 25.0 x 27.5	<b>1.26</b>

**NOTE:** RoHS Compliant



### MULTILAYER FERRITE CHIP BEADS CZB & CZP TYPE

**FEATURES:** Eliminates crosstalk and provides high reliability. Magnetically shielded. Nickel barrier with solder overcoat for excellent solderability.

Size Code	L	W	t	d
1E (0402)	.039±.004 (1.0±0.1)	.02±.004 (1.0±0.1)	.02±.004 (0.5±0.1)	.01±.004 (0.25±0.1)
1J (0603)	.063±.006 (1.6±1.5)	.063±.006 (1.6±0.15)	.031±.006 (0.8±0.15)	.014±.006 (0.36±0.15)
2A (0805)	.079±.008 (2.0±0.2)	.079±.008 (2.0±0.2)	.035±.008 (0.9±0.2)	.02±.01 (0.51±0.25)
2B (1206)	.126±.008 (3.2±0.2)	.126±.008 (3.2±0.2)	.043±.008 (1.1±0.2)	.02±.01 (0.51±0.25)

Cat. No.	Impedance @ 100MHzΩ	Tol.	DC Resistance Max. Ω	Allowable DC Current Max (mA)	Net Price
∅ CZB1EGTTP100P	10	±25%	0.05	500	<b>\$.35</b>
∅ CZB1EGTTP150P	15		0.07	300	<b>\$.35</b>
∅ CZB1EGTTP700P	70		0.40	200	<b>\$.35</b>
∅ CZB1EGTTP121P	120		0.50		<b>\$.35</b>
∅ CZB1EGTTP221P	220		0.70	100	<b>\$.39</b>
∅ CZB1EGTTP601P	600		1.10	50	<b>\$.39</b>
∅ CZB1EGTTP102P	1000		1.50		<b>\$.39</b>
∅ CZB1JGTTE600P	60		0.20	800	<b>\$.19</b>
∅ CZB1JGTTE750P	75				<b>\$.19</b>
∅ CZB1JGTTE900P	90			0.30	<b>\$.19</b>
∅ CZB1JGTTE101P	100				<b>\$.19</b>
∅ CZB1JGTTE221P	220				<b>\$.21</b>
∅ CZB1JGTTE301P	300		0.35	<b>\$.21</b>	
∅ CZB1JGTTE102P	1000		0.60	<b>\$.22</b>	
∅ CZB1JGTTE202P	2000		0.80	<b>\$.22</b>	
∅ CZB2AGTTE101P	100		0.10	400	<b>\$.21</b>
∅ CZB2AGTTE201P	200		0.30	200	<b>\$.23</b>
∅ CZB2AGTTE102P	1800		0.40		<b>\$.25</b>
∅ CZB2AGTTE222P	1000		0.80		<b>\$.56</b>
∅ CZB2BFTTE190P	19		0.10	600	<b>\$.16</b>
∅ CZB2BFTTE700P	70				<b>\$.16</b>

**NOTE:** Impedance test method: HP4291A DCR test method: Keithley 580. Standard operating temperature: -55°C ~ +125°C.

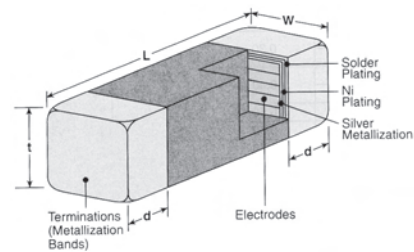
Cat. No.	Impedance @ 100MHzΩ	Tol.	DC Resistance Max. Ω	Allowable DC Current Max (mA)	Net Price
∅ CZB2BFTTE151P	150	±25%	0.15	300	<b>\$.17</b>
∅ CZB2BFTTE201P	200		0.30		<b>\$.23</b>
∅ CZB2BGTE152P	1500		0.90	100	<b>\$.33</b>
∅ CZP1JFTTE300P	30		0.10	2000	<b>\$.26</b>
∅ CZP1JFTTE121P	120				<b>\$.26</b>
∅ CZP2AFTE450P	45		0.03	2000	<b>\$.26</b>
∅ CZP2AFTE301P	300		0.15	1000	<b>\$.26</b>
∅ CZP2AFTE102P	1000		0.20		<b>\$.33</b>
∅ CZP2BFTTE260P	26		0.02	3000	<b>\$.24</b>
∅ CZP2BFTTE800P	80		0.03	2000	<b>\$.24</b>
∅ CZP2BFTTE101P	100		0.10	1000	<b>\$.26</b>

**NOTE:** P: ±25% tolerance. Impedance test method: HP4291A DCR test method: Keithley 580. Standard operating temperature: -55°C ~ +125°C.

MHL	1J	F	L	TD	27N	K
Type	Size Code	Permeability Code	Termination Material	Packaging	Impedance Inductance	Tolerance
MHL MCL CZB CZP KL	1E(0402) 1J(0603) 2A(0805) 2B(1206) 32(1210)	F  J P S T	L:SnPb T:Sn C:SnCu	TE TD TED	3 Digits	S:±0.3nH J:±5% K:±10% M:±20% P:±25%

### ORDERING INFORMATION FOR MULTILAYER FERRITE INDUCTORS

Packaging: TE: 7" embossed plastic, TD: 7" punched paper, TED: 10" embossed plastic.



### MULTILAYER FERRITE INDUCTOR MCL & MHL TYPE

**FEATURES:** Monolithic structure provides high reliability in a wide temperature and humidity range. MCL: magnetically shield, nickel barrier with solder overcoat for excellent solderability. MHL: high quality ceramic material and unique manufacturing provides high Q.

Size Code	L	W	t	d
1E (0402)	.039±.004 (1.0±0.1)	.02±.004 (0.5±0.1)	.02±.004 (0.5±0.1)	.01±.004 (0.25±0.1)
1J (0603)	.063±.006 (1.6±1.5)	.031±.006 (0.8±0.15)	.031±.006 (0.8±0.15)	.014±.006 (0.36±0.15)
2A (0805)	.079±.008 (2.0±0.2)	.049±.008 (1.25±0.2)	.035±.008 (0.9±0.2)	.02±.01 (0.51±0.25)
2B (1206)	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.043±.008 (1.1±0.2)	.02±.01 (0.51±0.25)

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