

SMT COMMON MODE CHOKES

Industrial Grade



- ⚙ Enhanced SLIC platform
- ⚙ Dielectric strength: 1500 VRMS
- ⚙ Designed for DC/DC converter
- ⚙ Moisture Sensitivity Level : 1

Electrical Specifications @ 25°C – Operating Temperature – 40°C to +125°C

Part Number	Inductance per Winding ($\mu\text{H} \pm 35\%$)	Irated (A)	DCR per winding (m Ω MAX)	Curve (see # below)	Package	Weight (grams)	Quantity in Tube	Quantity in Reel
R8100NL	470	14.0	8	9	HCCI-80	14.8	15	75
R8101NL	630	11.6	10	7	HCCI-80	15.38	20	75
R8102NL	810	9.70	14	6	HCCI-80	14.42	20	75
R8103NL	534	7.20	15	8	HCCI-68	7.27	15	100
R8104NL	590	5.60	21	7	LCCI-50	4.97	30	200
R8105NL	768	4.70	40	6	LCCI-50	4.69	30	200
R8106NL	225	3.30	60	5	LCCI-50	4.78	30	200
R8107NL	1320	3.30	60	4	LCCI-50	4.38	30	200
R8108NL	1470	2.80	80	3	LCCI-50	4.40	30	200
R8109NL	880	1.63	110	2	Polecat	1.4	40	500
R8110NL	1170	1.22	200	1	Polecat	1.4	40	500
R8111NL	10040	1.4	210	10	LCCI-50	5.47	20	200
R8112NL	1125	1.8	55	11	Polecat	1.55	40	500
R8113NL	800	3	27	12	Polecat	2.46	40	300
R8114NL	382.5	3.3	18	13	Polecat	1.71	40	200
R8115NL	536	3.8	17.1	14	LCCI-37	2.52	30	200
R8116NL	280	4	13.2	15	Polecat	1.6	40	500
R8117NL	486	4.2	16	16	LCCI-44LP	2.99	40	300
R8118NL	130	5	6.75	17	Polecat	1.6	40	500
R8119NL	96	6	4.3	18	Polecat	1.67	40	500
R8120NL	400	6	9.4	19	LCCI-44LP	3.53	40	200
R8121NL	61	7	2.9	20	Polecat	1.73	40	500
R8122NL	484	8	7.7	21	LCCI-50	5.31	30	200
R8123NL	1030	9	9.75	22	HCCI-80	14.63	20	75
R8124NL	215	10	3.75	23	Makeni	6.26	25	150
R8125NL	95	12.5	3	24	LCCI-50	5.3	30	200
R8126NL	117	14	1.95	25	Makeni	6.2	25	150
R8127NL	500	16	4.25	26	HCCI-80	18.13	20	75
R8128NL	380	20	4.1	27	HCCI-80	15.70	20	75

Notes: 1. The current rating (irated) is based upon the temperature rise of the component and represents the rms current, which will cause a typical temperature rise of 55°C with 50LFM forced cooling.

2. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

3. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. R8100NL becomes **R8100NLT**.)

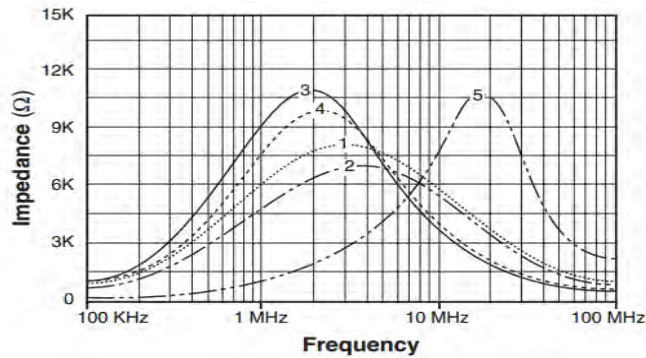


SMT COMMON MODE CHOKES

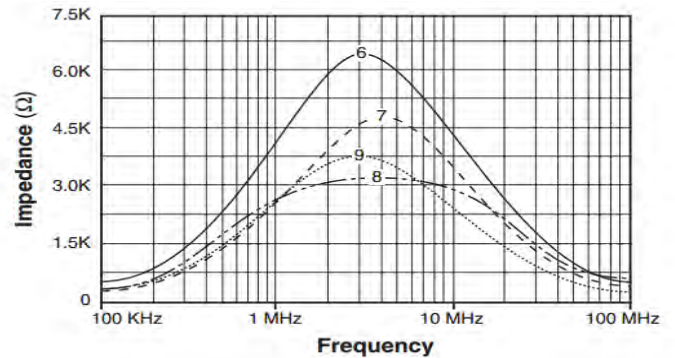
SLIC Series
Industrial Grade



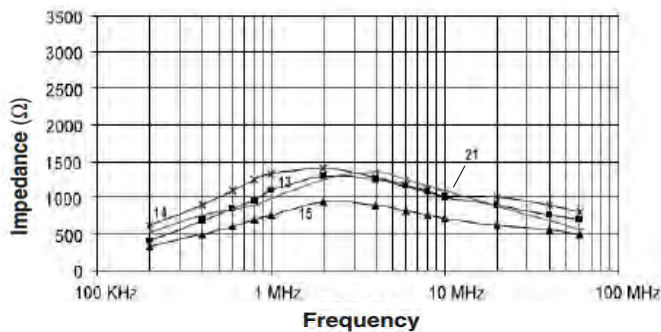
Impedance Curves



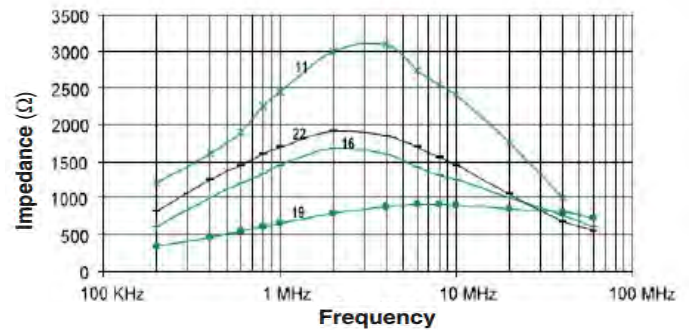
R8106NL (#5), R8107NL (#4), R8108NL (#3), R8109NL (#2), R8110NL (#1)



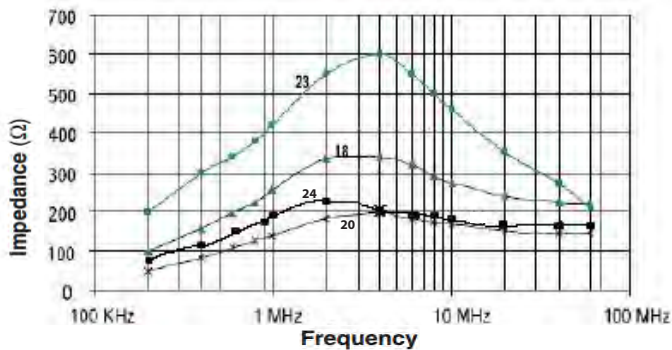
R8100NL (#9), PR8101NL (#7), R8102NL (#6), R8103NL (#8), R8104NL (#7), R8105NL (#6)



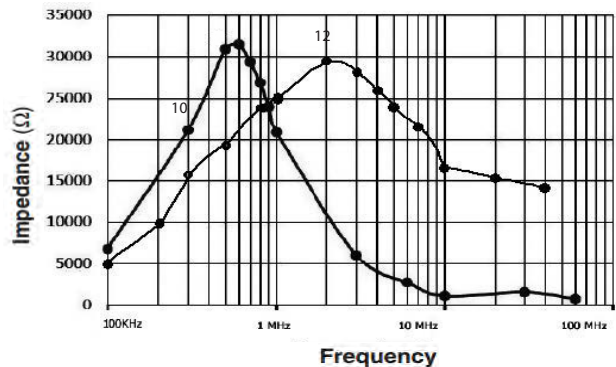
R8114NL (#13), R8115NL (#14), R8116NL (#15), R8122NL (#21)



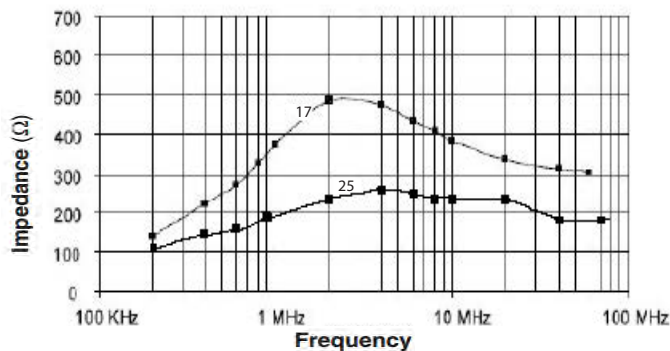
R8112NL (#11), R8117NL (#16), R8120NL (#19), R8123NL (#22)



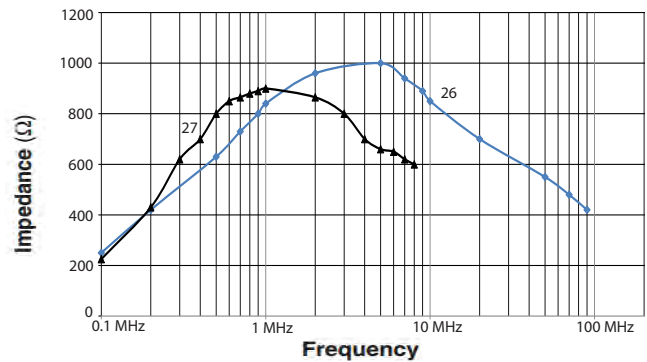
R8119NL (#18), R8121NL (#20), R8124NL (#23), R8125NL (#24)



R8111NL (#10), R8113NL (#12)



R8118NL (#17), R8126NL (#25)



R8127NL (#26), R8128NL (#27)



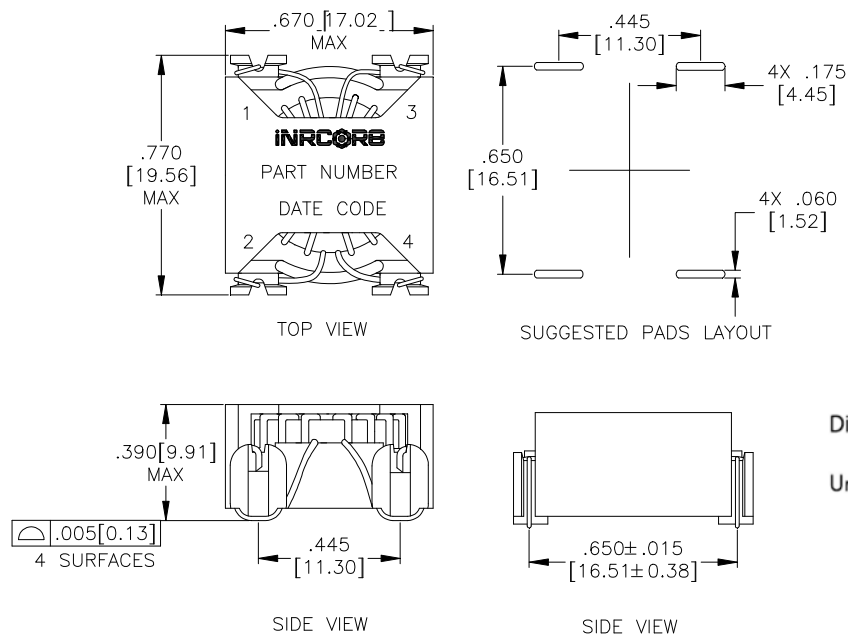
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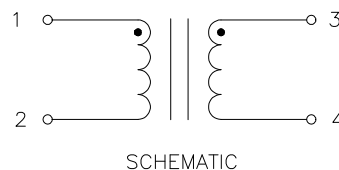


Mechanicals

LCCI-50 - R8104/05/06/07/08NL, R8111NL, R8122/25NL



Electrical Schematics



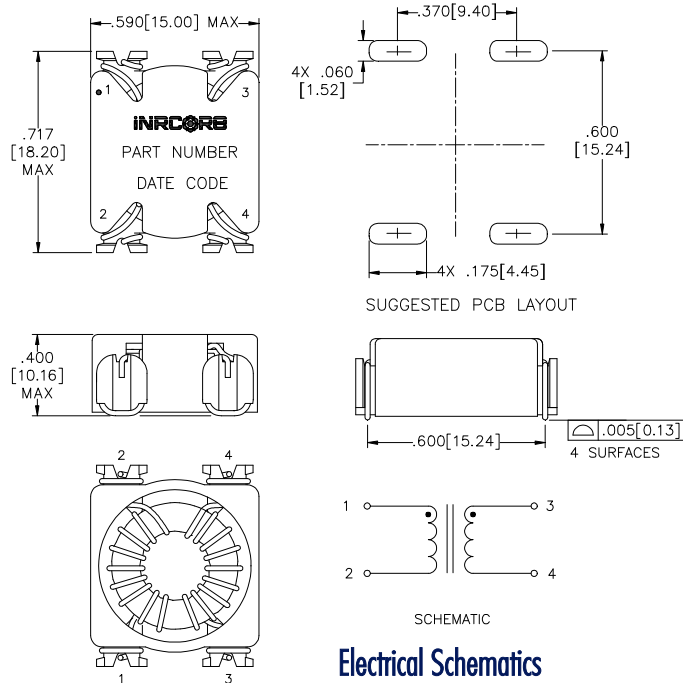
Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are: $\pm \frac{.010}{0,25}$

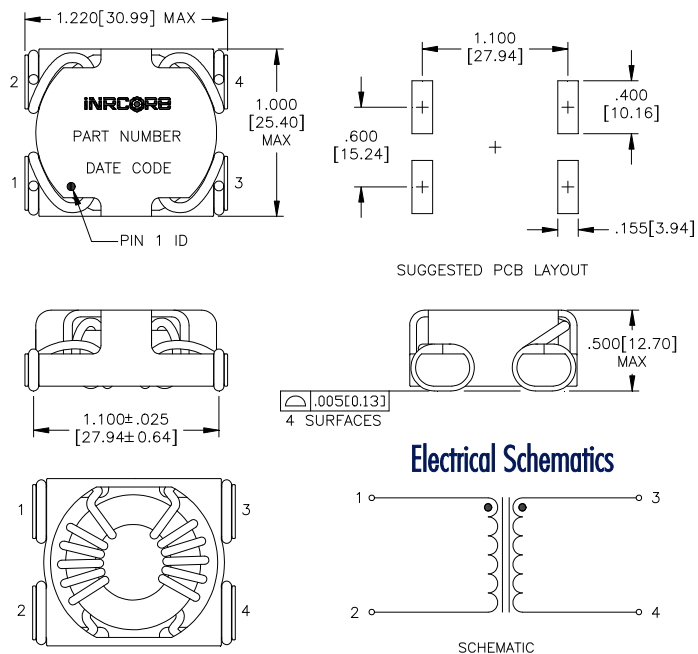
Mechanicals

LCCI-44LP - R8117NL, R8120NL

HCCI-80 - R8100/01/02NL, R8123/27/28NL



Electrical Schematics



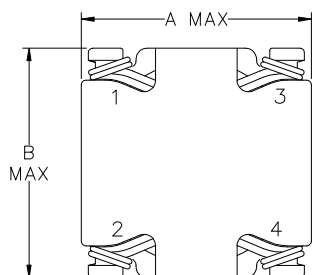
SMT COMMON MODE CHOKES

SLIC Series
Industrial Grade

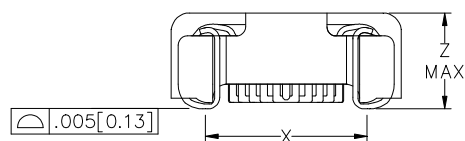


Mechanicals

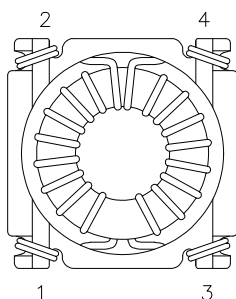
PoleCat - R8109NL, R8110/12/13NL/14NL/16/18/19NL, R8121NL



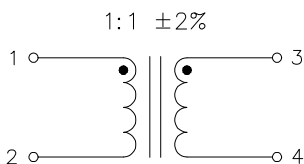
TOP VIEW



SIDE VIEW

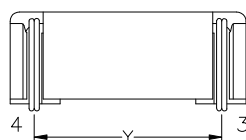


BOTTOM VIEW

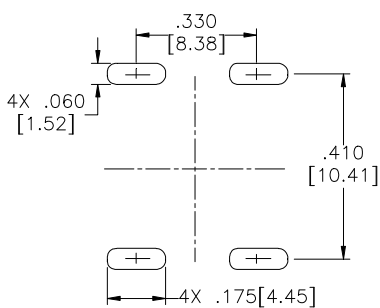


SCHEMATIC

Electrical Schematic



SIDE VIEW



SUGGESTED PCB LAYOUT

PoleCat Dimensions

Part number	A	B	X	Y	Z
R8109NL	13.0	13.0	8.4	10.4	5.6
R8110NL	12.7	12.7	8.4	10.4	5.6
R8112NL	12.7	13.2	8.4	10.4	5.6
R8113NL	13.0	13.0	8.4	10.4	5.6
R8114NL	13.0	13.0	8.4	10.4	5.6
R8116NL	13.0	13.0	8.4	10.4	5.6
R8118NL	13.2	13.2	8.6	10.7	5.6
R8119NL	13.2	13.2	8.6	10.7	5.6
R8121NL	13.5	13.5	8.6	10.7	5.6

Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are: $\pm \frac{.010}{0,25}$



SMT COMMON MODE CHOKES

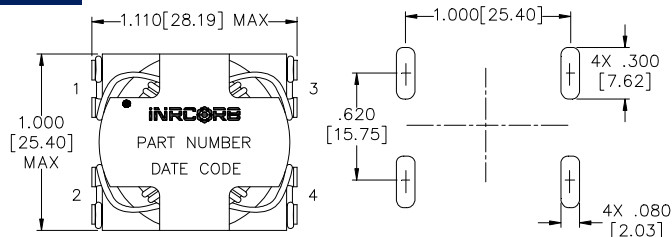
SLIC Series
Industrial Grade



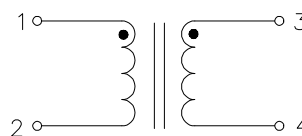
Mechanicals

Electrical Schematics

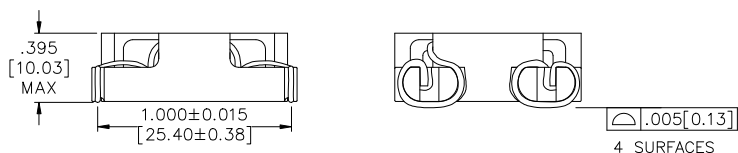
HCCI-68 - R8103NL



SUGGESTED PCB LAYOUT



SCHEMATIC

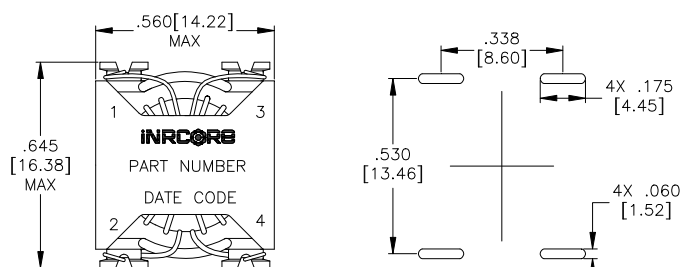


Dimensions: $\frac{\text{Inches}}{\text{mm}}$

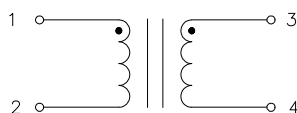
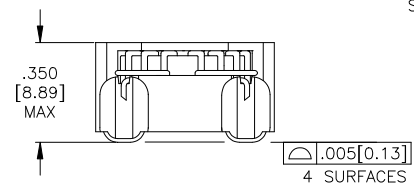
Unless otherwise specified, all tolerances are: $\pm \frac{.010}{0,25}$

Mechanicals

LCCI-37 - R8115NL

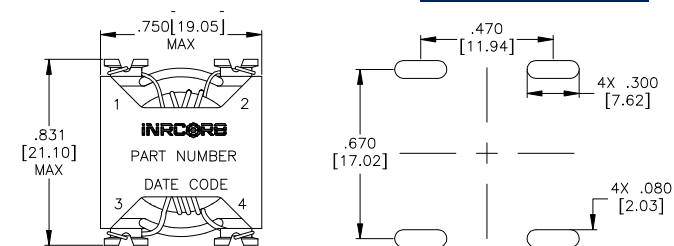


SUGGESTED PADS LAYOUT

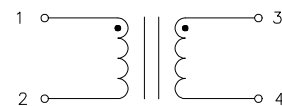
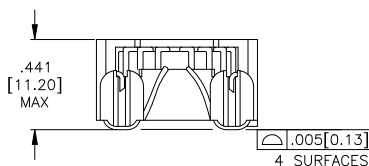


SCHEMATIC
Electrical Schematics

Makeni - R8124/26NL



SUGGESTED PADS LAYOUT



SCHEMATIC
Electrical Schematics

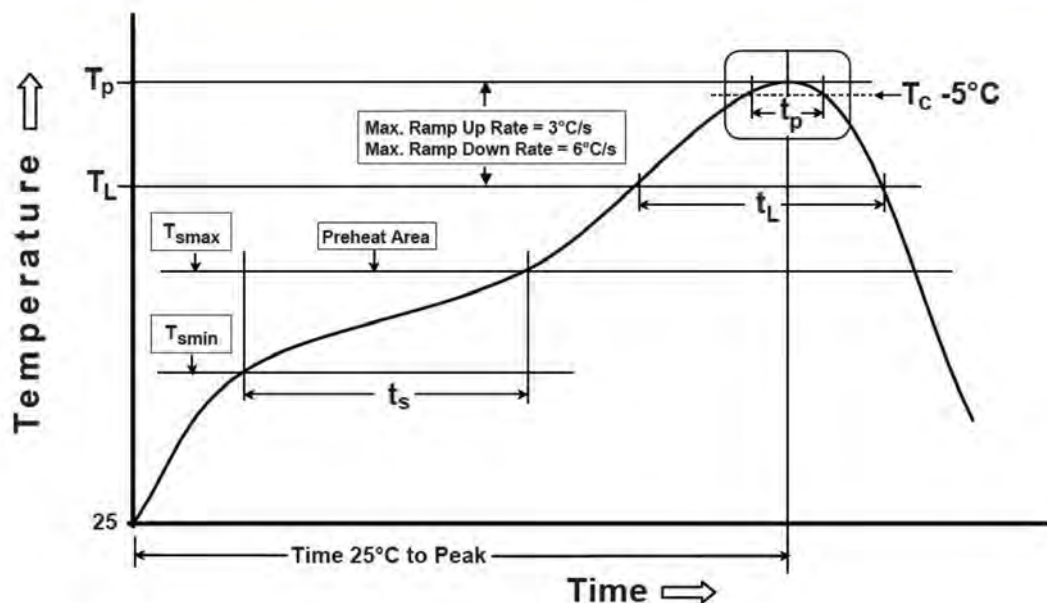


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Non-Lead Recommended Reflow Profile (Based on J-STD-020D)



T_{SMIN} (°C)	T_{SMAX} (°C)	T_L (°C)	T_P (°C MAX)	t_s (s)	t_L (s)	t_p (s MAX)	Ramp-up rate (T_L to T_P)	Ramp-down rate (T_P to T_L)	Time 25°C to peak temperature (s MAX)
150	200	217	245	60-120	60-150	30	3°C/s MAX	6°C/s MAX	480

Notes:

1. All temperatures measured on the package leads.
2. Maximum times of reflow cycle: 2.

For More Information

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iNRCORE:

<u>R8100NL</u>	<u>R8100NLT</u>	<u>R8101NL</u>	<u>R8101NLT</u>	<u>R8102NL</u>	<u>R8102NLT</u>	<u>R8127NL</u>	<u>R8127NLT</u>	<u>R8128NL</u>	<u>R8128NLT</u>
<u>R8124NL</u>	<u>R8124NLT</u>	<u>R8125NL</u>	<u>R8125NLT</u>	<u>R8126NL</u>	<u>R8126NLT</u>	<u>R8121NL</u>	<u>R8121NLT</u>	<u>R8122NL</u>	<u>R8122NLT</u>
<u>R8123NL</u>	<u>R8123NLT</u>	<u>R8118NLT</u>	<u>R8119NL</u>	<u>R8119NLT</u>	<u>R811N8L</u>	<u>R8120NL</u>	<u>R8120NLT</u>	<u>R8115NL</u>	<u>R8115NLT</u>
<u>R8116NL</u>	<u>R8116NLT</u>	<u>R8117NL</u>	<u>R8117NLT</u>	<u>R8112NL</u>	<u>R8112NLT</u>	<u>R8113NL</u>	<u>R8113NLT</u>	<u>R8114NL</u>	<u>R8114NLT</u>
<u>R8109NL</u>	<u>R8109NLT</u>	<u>R8110NL</u>	<u>R8110NLT</u>	<u>R8111NL</u>	<u>R8111NLT</u>	<u>R8106NL</u>	<u>R8106NLT</u>	<u>R8107NL</u>	<u>R8107NLT</u>
<u>R8108NL</u>	<u>R8108NLT</u>	<u>R8103NL</u>	<u>R8103NLT</u>	<u>R8104NL</u>	<u>R8104NLT</u>	<u>R8105NL</u>	<u>R8105NLT</u>		