COAXIAL COMMUNICATION BANDS

N TYPE STANDARD CIRCULATOR

PRODUCT DESCRIPTION

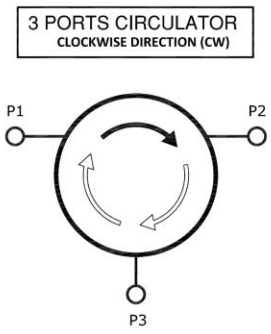
RFCI Coaxial Circulators product allows the selection of the smallest practical size in relationship to the required frequency range coverage. RFCI guarantees the RF performance of every miniature Circulators across the specific operating temperature range. Circulators design for applications in high performance linear power amplifiers.

KEY FEATURES

- Miniature and Standard package size.
- Robust Construction for High Reliability performance
- RoHS compliant
- Low typical Insertion loss, High Isolation
- Magnetically Shielded.

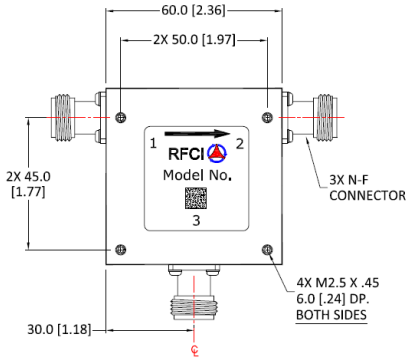
- N type Female is Standard Products. Available with alternative configuration such as male connectors, high power termination and reverse rotation direction.
- S-parameters are available upon request.

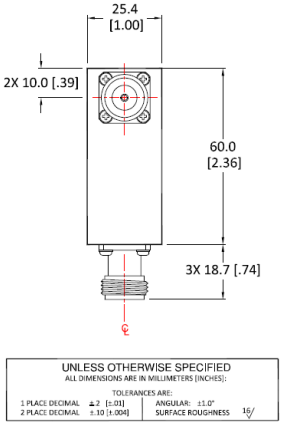
FUNCTION DIAGRAM



CIRCULATOR OUTLINE DRAWING

Figure NC-01
(N Type STANDARD 60mm Package)





Notes:
1. Typical Values Represent Performance @ +23 °C
2. S-Parameters to be measured by connecting Port 1 and 2 to VNA, and Port 3 to Load with return loss 30dB or higher

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN MILLIMETERS [INCHES]:
TOLERANCES ARE:
1 PLACE DECIMAL ±.2 [±.01] | ANGULAR: ±1.0°
2 PLACE DECIMAL ±.10 [±.004] | SURFACE ROUGHNESS 16/

RF Circulator Isolator Inc. ■ Phone +1 408 977 1526 Fax +1 408 977 1534 ■ sales@rf-ci.com
Visit www.rf-ci.com for addition data sheets and information

N Type Circulator (60mm, 50mm and 45mm Package)

Frequency Range (MHz)		Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Fwd. PWR P/CW (W)	Rev PWR CW (W)	Operating Temperature	Package Outline FIG.	RFCI Part No.
Low	High	Room/OT	Room/OT	Room/OT	Max.	Max.	(ºC)		
205	230	0.50/0.70	20/18	20/18	2.5K/250	250	-20 to +85°C	NC-01	RFCR6126
220	280	0.50/0.70	19/17	19/17	2.5K/250	250	-20 to +85°C	NC-01	RFCR6127
270	335	0.40/0.60	20/18	20/18	2.5K/250	250	-20 to +85°C	NC-01	RFCR6128
270	330	0.40/0.50	20/18	20/18	2.5K/250	250	-20 to +85°C	NC-02	RFCR6101
325	400	0.40/0.50	21/18	21/18	2.5K/250	250	-20 to +85°C	NC-02	RFCR6129
328	406	0.40/0.50	20/18	20/18	2.5K/250	250	-20 to +85°C	NC-02	RFCR6102
330	360	0.40/0.50	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6108
350	410	0.40/0.50	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-02	RFCR6130
350	380	0.30/0.40	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6109
360	390	0.30/0.40	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6110
380	470	0.40/0.50	21/19	21/19	2.5K/250	250	-20 to +85°C	NC-02	RFCR6103
380	430	0.30/0.40	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6111
400	500	0.40/0.50	21/18	21/18	2.5K/250	250	-20 to +85°C	NC-02	RFCR6104
400	470	0.40/0.50	21/18	21/18	2.5K/250	250	-20 to +85°C	NC-03	RFCR6131
400	450	0.30/0.40	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6112
415	455	0.30/0.40	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6113
450	500	0.30/0.40	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6114
470	570	0.40/0.50	20/18	20/18	2.5K/250	250	-20 to +85°C	NC-03	RFCR6132
470	520	0.30/0.40	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6115
512	698	0.50/0.60	19/17	19/17	2.5K/250	250	-20 to +85°C	NC-02	RFCR6106
520	576	0.30/0.40	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6116
570	670	0.40/0.50	20/18	20/18	2.5K/250	250	-20 to +85°C	NC-03	RFCR6133
576	638	0.30/0.40	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6117
600	800	0.50/0.60	19/17	19/17	2.5K/250	250	-20 to +85°C	NC-02	RFCR6107
600	750	0.40/0.50	21/19	21/19	2.5K/250	250	-20 to +85°C	NC-03	RFCR6118
700	1000	0.50/0.60	17/16.5	17/16.5	2.5K/250	250	-20 to +85°C	NC-03	RFCR6119
770	870	0.40/0.50	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6134
800	1000	0.40/0.50	19/18	19/18	2.5K/250	250	-20 to +85°C	NC-03	RFCR6202
800	960	0.40/0.50	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-03	RFCR6203
950	1250	0.60/0.70	17/16.5	17/16.5	2.5K/250	250	-20 to +85°C	NC-03	RFCR6309
960	1260	0.60/0.70	17/16.5	17/16.5	2.5K/250	250	-20 to +85°C	NC-03	RFCR6310

Standard Part Number is N type Female and Clockwise (CW) Rotation. Add letter "R" at the end to Part number for a Counter Clockwise (CCW) Rotation

- S-Parameters to be measured by connecting Port 1 and Port 2 to VNA and Port 3 to Load with load return loss 30dB or higher.
- See RFCI website www.rf-ci.com for complete part datasheet.

RF Circulator Isolator Inc. ■ Phone +1 408 977 1526 Fax +1 408 977 1534 ■ sales@rf-ci.com

N Type Circulator (38mm and 32mm Package)

Frequency Range (MHz)		Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Fwd. PWR P/CW (W)	Rev PWR CW (W)	Operating Temperature	Package Outline FIG.	RFCI Part No.
Low	High	Room/OT	Room/OT	Room/OT	Max.	Max.	(ºC)		
638	704	0.30/0.40	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-04	RFCR6120
698	806	0.30/0.40	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-04	RFCR6121
700	850	0.40/0.50	22/20	22/20	2.0K/200	200	-40 to +85°C	NC-05	RFCR6123
700	830	0.40/0.50	22/20	22/20	2.5K/250	250	-20 to +85°C	NC-04	RFCR6122
790	960	0.40/0.50	22/20	22/20	2.0K/200	200	-40 to +85°C	NC-05	RFCR6201
850	1030	0.40/0.50	22/20	22/20	2.0K/200	200	-40 to +85°C	NC-05	RFCR6302
900	1100	0.40/0.50	22/20	22/20	2.0K/200	200	-40 to +85°C	NC-05	RFCR6303
940	1200	0.40/0.50	20/18	20/18	2.5K/250	250	-20 to +85°C	NC-04	RFCR6308
960	1215	0.40/0.50	22/20	22/20	2.0K/200	200	-40 to +85°C	NC-05	RFCR6304
1000	1400	0.50/0.60	19/17	19/17	2.5K/250	250	-20 to +85°C	NC-04	RFCR6301
1000	1220	0.40/0.50	22/20	22/20	2.0K/200	200	-40 to +85°C	NC-05	RFCR6305
1100	1300	0.40/0.50	22/20	22/20	2.0K/200	200	-40 to +85°C	NC-05	RFCR6306
1200	1450	0.40/0.50	22/20	22/20	2.0K/200	200	-40 to +85°C	NC-05	RFCR6307
1300	1700	0.50/0.60	19/17	19/17	2.5K/250	250	-20 to +85°C	NC-04	RFCR6406
1350	1850	0.50/0.60	18/17	18/17	2.0K/200	200	-40 to +85°C	NC-05	RFCR6401
1400	1700	0.40/0.50	21/19	21/19	2.0K/200	200	-40 to +85°C	NC-05	RFCR6402
1600	2000	0.40/0.50	20/18	20/18	2.0K/200	200	-40 to +85°C	NC-05	RFCR6407

Standard Part Number is N type Female and Clockwise (CW) Rotation. Add letter “R” at the end to Part number for a Counter Clockwise (CCW) Rotation

- S-Parameters to be measured by connecting Port 1 and Port 2 to VNA and Port 3 to Load with load return loss 30dB or higher.
- See RFCI website www.rf-ci.com for complete part datasheet.

RF Circulator Isolator Inc. ■ Phone +1 408 977 1526 Fax +1 408 977 1534 ■ sales@rf-ci.com

N Type Circulator (25.4mm Package)

Frequency Range (MHz)		Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Fwd. PWR P/CW (W)	Rev PWR CW (W)	Operating Temperature	Package Outline FIG.	RFCI Part No.
Low	High	Room/OT	Room/OT	Room/OT	Max.	Max.	(ºC)		
1500	1800	0.30/0.40	23/20	23/20	2.0K/200	200	-40 to +85°C	NC-06	RFCR6404
1700	2100	0.30/0.40	23/20	23/20	2.0K/200	200	-40 to +85°C	NC-06	RFCR6601
1765	2250	0.40/0.50	21/19	21/19	2.0K/200	200	-40 to +85°C	NC-06	RFCR6603
1800	2200	0.40/0.50	21/19	21/19	2.0K/200	200	-40 to +85°C	NC-06	RFCR6501
1980	2520	0.40/0.50	21/19	21/19	2.0K/200	200	-40 to +85°C	NC-06	RFCR6604
2000	2400	0.40/0.50	21/19	21/19	2.0K/200	200	-40 to +85°C	NC-06	RFCR6702
2000	2300	0.30/0.40	23/20	23/20	2.0K/200	200	-40 to +85°C	NC-06	RFCR6701
2100	2600	0.30/0.40	23/20	23/20	2.0K/200	200	-40 to +85°C	NC-06	RFCR6801
2300	2700	0.30/0.40	23/20	23/20	2.0K/200	200	-40 to +85°C	NC-06	RFCR6802
2400	3000	0.30/0.40	23/20	23/20	2.0K/200	200	-40 to +85°C	NC-06	RFCR6812
2500	2900	0.30/0.40	23/20	23/20	2.0K/200	200	-40 to +85°C	NC-06	RFCR6803
2700	3300	0.40/0.50	21/19	21/19	2.0K/100	100	-40 to +85°C	NC-06	RFCR6813
2700	3100	0.30/0.40	23/20	23/20	2.0K/100	100	-40 to +85°C	NC-06	RFCR6804
2800	3300	0.30/0.40	23/20	23/20	2.0K/100	100	-40 to +85°C	NC-06	RFCR6805
2900	3500	0.30/0.40	23/20	23/20	2.0K/100	100	-40 to +85°C	NC-06	RFCR6806
3300	3800	0.40/0.50	21/19	21/19	2.0K/100	100	-20 to +85°C	NC-06	RFCR6811
3300	3800	0.30/0.40	23/20	23/20	500/50	50	-20 to +85°C	NC-06	RFCR6807
3400	4200	0.30/0.40	23/20	23/20	500/50	50	-20 to +85°C	NC-06	RFCR6808
3600	4300	0.30/0.40	23/20	23/20	500/50	50	-20 to +85°C	NC-06	RFCR6809
3900	4700	0.30/0.40	23/20	23/20	500/50	50	-20 to +85°C	NC-06	RFCR6901
4200	5200	0.30/0.40	23/20	23/20	500/50	50	-20 to +85°C	NC-06	RFCR6902
5000	6000	0.30/0.40	23/20	23/20	500/50	50	-20 to +85°C	NC-06	RFCR6903
5700	6800	0.30/0.40	23/20	23/20	500/50	50	-20 to +85°C	NC-06	RFCR6904
6000	8000	0.30/0.40	23/20	23/20	500/50	50	-20 to +85°C	NC-06	RFCR6905

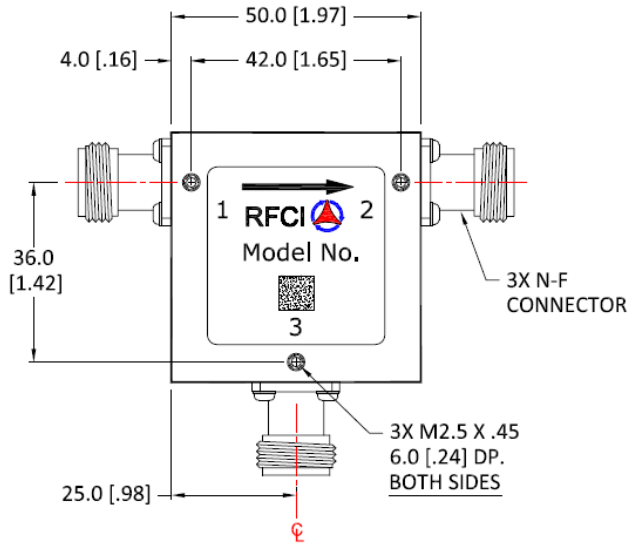
Standard Part Number is N type Female and Clockwise (CW) Rotation. Add letter "R" at the end to Part number for a Counter Clockwise (CCW) Rotation

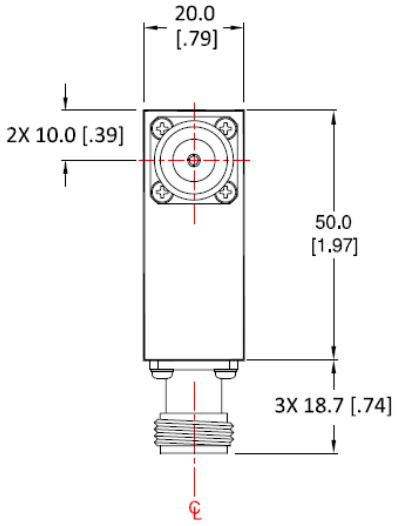
- S-Parameters to be measured by connecting Port 1 and Port 2 to VNA and Port 3 to Load with load return loss 30dB or higher.
- See RFCI website www.rf-ci.com for complete part datasheet.

RF Circulator Isolator Inc. ■ Phone +1 408 977 1526 Fax +1 408 977 1534 ■ sales@rf-ci.com

Figure NC-02

(N Type STANDARD 50mm Package)



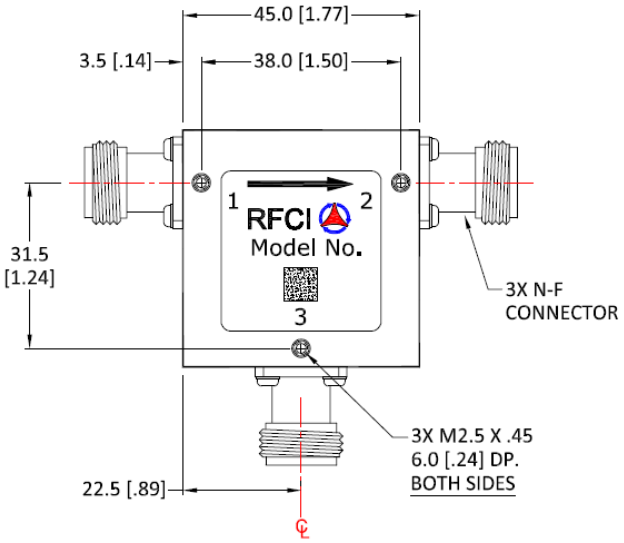


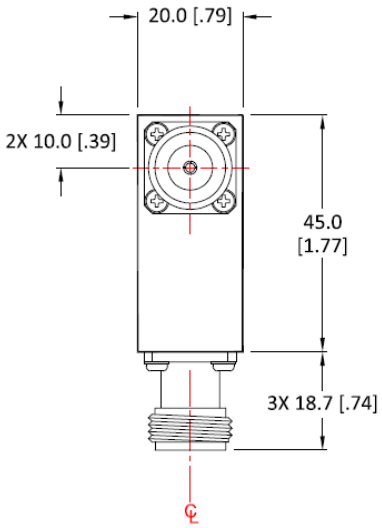
Notes:
1. Typical Values Represent Performance @ +23 °C
2. S-Parameters to be measured by connecting Port 1 and 2 to VNA, and Port 3 to Load with return loss 30dB or higher

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN MILLIMETERS [INCHES]:
TOLERANCES ARE:
1 PLACE DECIMAL ±.2 [±.01] | ANGULAR: ±1.0°
2 PLACE DECIMAL ±.10 [±.004] | SURFACE ROUGHNESS 16

Figure NC-03

(N Type STANDARD 45mm Package)





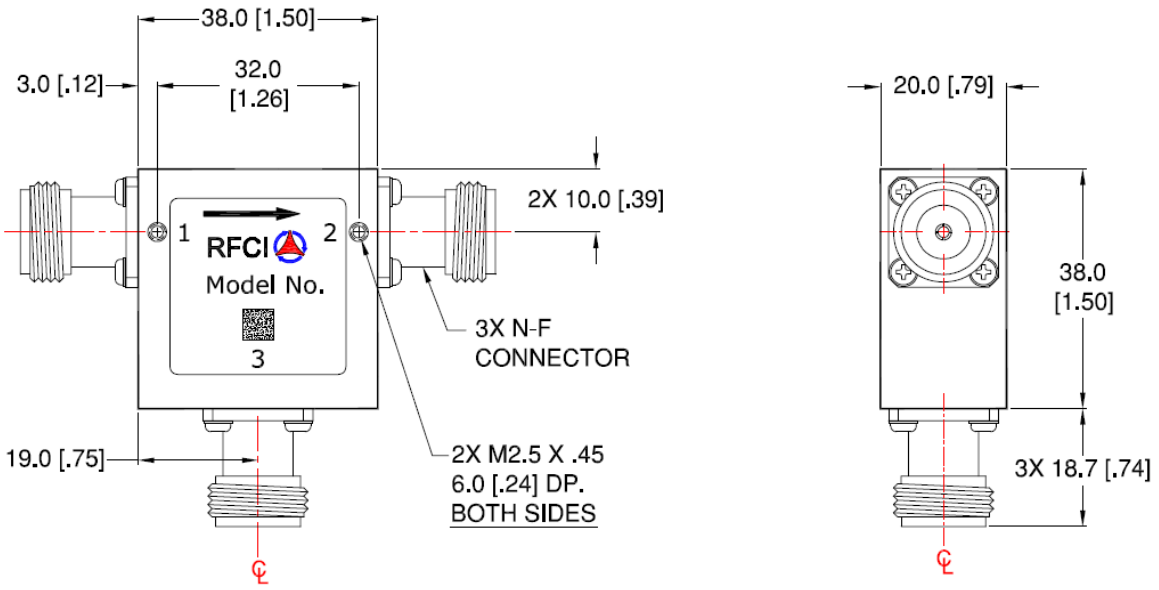
Notes:
1. Typical Values Represent Performance @ +23 °C
2. S-Parameters to be measured by connecting Port 1 and 2 to VNA, and Port 3 to Load with return loss 30dB or higher

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN MILLIMETERS [INCHES]:
TOLERANCES ARE:
1 PLACE DECIMAL ±.2 [±.01] | ANGULAR: ±1.0°
2 PLACE DECIMAL ±.10 [±.004] | SURFACE ROUGHNESS 16

RF Circulator Isolator Inc. ■ Phone +1 408 977 1526 Fax +1 408 977 1534 ■ sales@rf-ci.com

Figure NC-04

(N Type STANDARD 38mm Package)

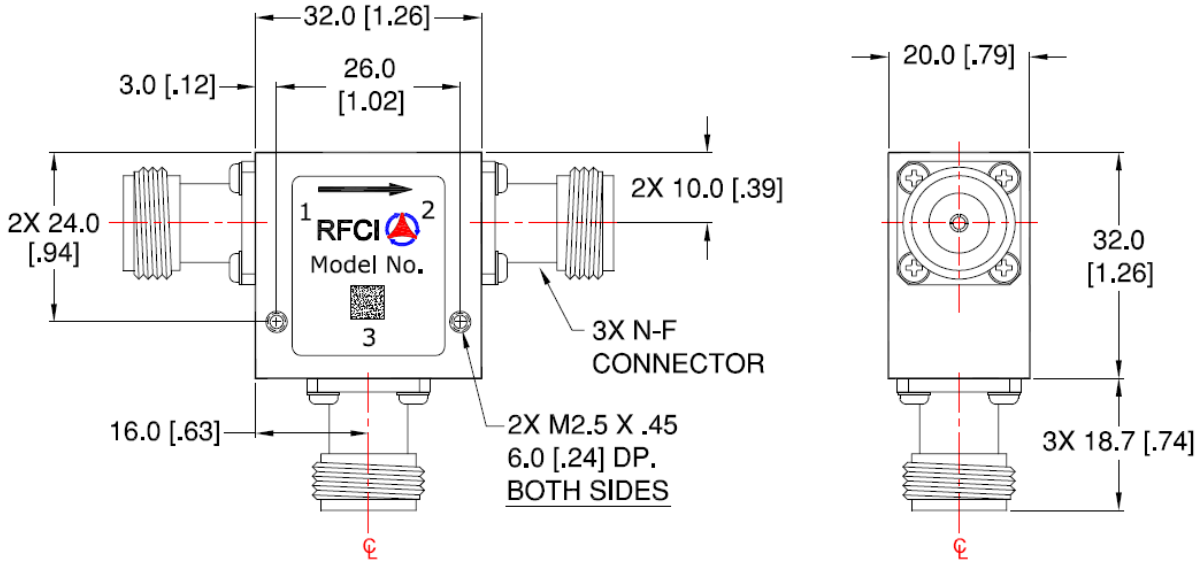


Notes:
1. Typical Values Represent Performance @ +23 °C
2. S-Parameters to be measured by connecting Port 1 and 2 to VNA, and Port 3 to Load with return loss 30dB or higher

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN MILLIMETERS [INCHES]:
TOLERANCES ARE:
1 PLACE DECIMAL ±.2 [±.01] | ANGULAR: ±1.0°
2 PLACE DECIMAL ±.10 [±.004] | SURFACE ROUGHNESS 16

Figure NC-05

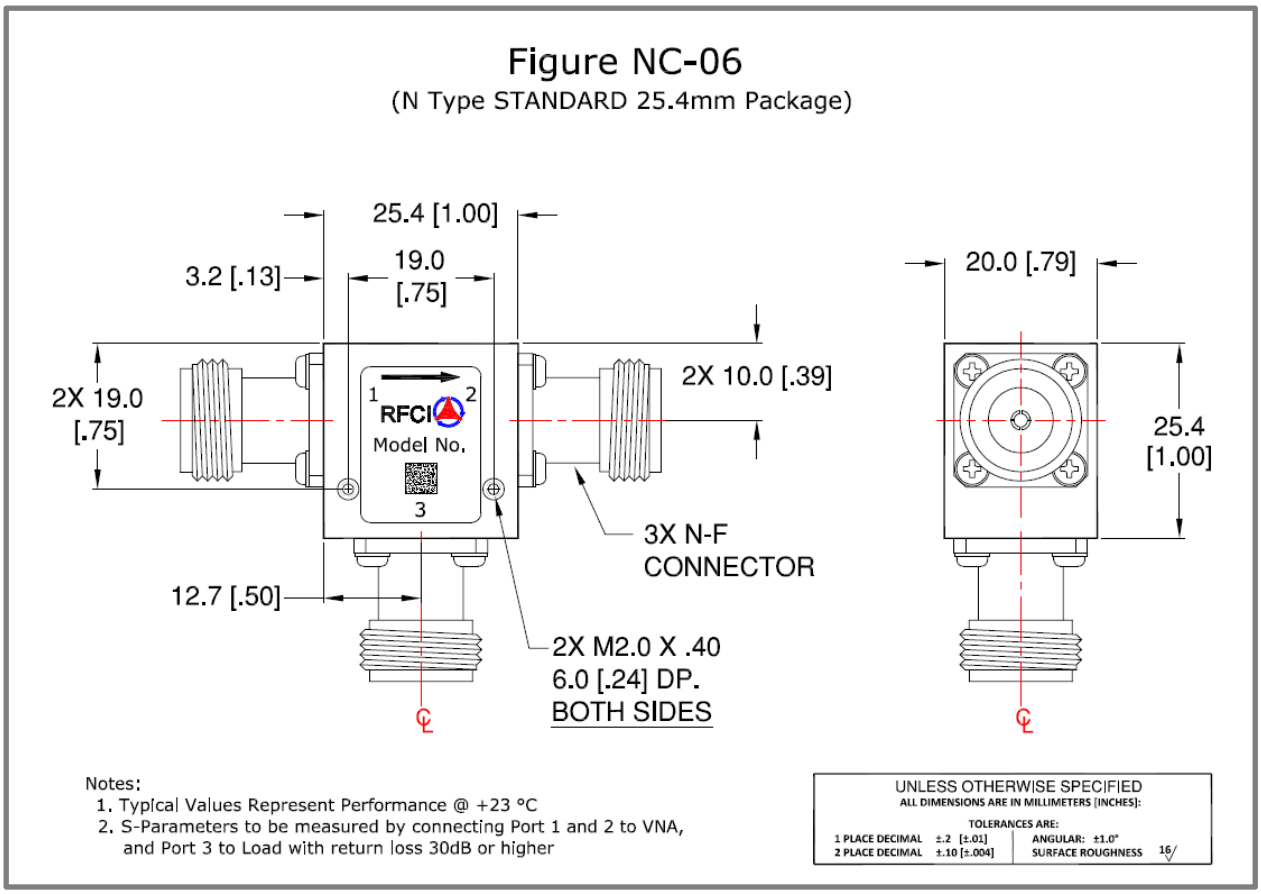
(N Type STANDARD 32mm Package)



Notes:
1. Typical Values Represent Performance @ +23 °C
2. S-Parameters to be measured by connecting Port 1 and 2 to VNA, and Port 3 to Load with return loss 30dB or higher

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN MILLIMETERS [INCHES]:
TOLERANCES ARE:
1 PLACE DECIMAL ±.2 [±.01] | ANGULAR: ±1.0°
2 PLACE DECIMAL ±.10 [±.004] | SURFACE ROUGHNESS 16

RF Circulator Isolator Inc. ■ Phone +1 408 977 1526 Fax +1 408 977 1534 ■ sales@rf-ci.com



Standard Part Number is N type Female and Clockwise (CW) Rotation. Add letter “R” at the end to Part number for a Counter Clockwise (CCW) Rotation

- S-Parameters to be measured by connecting Port 1 and Port 2 to VNA and Port 3 to Load with load return loss 30dB or higher.
- See RFCI website www.rf-ci.com for complete part datasheet.

RF Circulator Isolator Inc. ■ Phone +1 408 977 1526 Fax +1 408 977 1534 ■ sales@rf-ci.com