



Positive Train Control (PTC) Filter, Railroad RF Band Pass,  
219.5 MHz to 222 MHz, Type N F/F, 20W CW, IP54



## RRF-ITC-219-NFF

### Features

- Max Power 20W
- Frequency Range from 219.5 MHz to 222 MHz
- N-Type Female connectors
- Waterproof IP54 rated
- VSWR Typical 1.5:2

### Description

RF band pass filter RRF-ITC-219-NFF from PolyPhaser, is a combine filter with high rejection. This RF filter is manufactured in a coaxial in-line design with a specific operating frequency range. All PolyPhaser RF surge protector products are available in stock with same day shipping.

### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Passband Frequency	219.5		222	MHz
Impedance		50		Ohms
Insertion Loss			2.5	dB
Passband VSWR		1.5:1		
Passband Return Loss		14		dB
Rejection at 88 MHz	60	33		dB
Rejection at 458 MHz	60	33		dB
Input Power, CW			20	Watts

Electrical Specification Notes:  
Values at 25°C, sea level.

### Mechanical Specifications

#### Size

Length	15.18 in [385.57 mm]
Width	11.11 in [282.19 mm]
Height	2.99 in [75.95 mm]
Weight	1 lbs [453.59 g]

#### Configuration

Design	Combine
Number of Sections	
Connector 1	N Female
Connector 2	N Female

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications:  
[Positive Train Control \(PTC\) Filter, Railroad RF Band Pass, 219.5 MHz to 222 MHz, Type N F/F, 20W CW, IP54 RRF-ITC-219-NFF](#)



Positive Train Control (PTC) Filter, Railroad RF Band Pass,  
219.5 MHz to 222 MHz, Type N F/F, 20W CW, IP54



## RRF-ITC-219-NFF

### Environmental Specifications

#### Temperature

Operating Range

-40 to +70 deg C

#### Environment

Ingress Protection (IP) Rating

IP54

Humidity

40% to 95%, Non-condensing

Vibration

5 to 10 Hz = 7.6mm

10 to 200 Hz = 1.5 G

Mech shock - 10 G

### Compliance Certifications (see [product page](#) for current document)

### Plotted and Other Data

Notes:

- Values at 25°C, sea level.

PolyPhaser protects and increases the reliability of global RF communications networks, including transportation, telecommunications, defense, security and industrial applications, with superior RF surge protection technologies including DC Block, DC Pass and Ultra Low PIM. Backed by responsive service and expert technical support PolyPhaser continually expands its product offering and services to serve engineers' urgent needs for RF components in mission critical communication networks.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Positive Train Control \(PTC\) Filter, Railroad RF Band Pass, 219.5 MHz to 222 MHz, Type N F/F, 20W CW, IP54 RRF-ITC-219-NFF](#)

URL: <https://www.polyphaser.com/railroad-band-pass-219.5-222-mhz-rrf-itc-219-nff>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. PolyPhaser reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. PolyPhaser does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and PolyPhaser does not assume any liability arising out of the use of any part or documentation.

RRF-ITC-219-NFF CAD Drawing

