



ISO 9001 Certified

### *LP-BTR Series*

- *DC Blocked for Maximum Surge Protection*
- *Multi-Strike Capability*
- *Broadband Performance from 20MHz up to 1000MHz*
- *Exceptional RF Characteristics*
- *Solid Brass Construction for Durability and Long Life*
- *Universal Grounding Bracket for Flange or Bulkhead Installations*



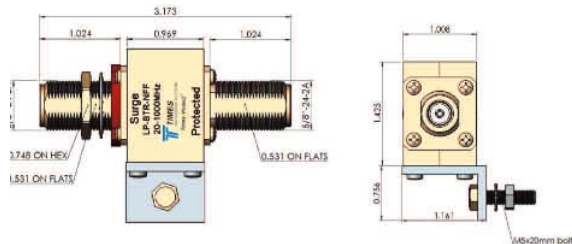
### *Lightning and Surge Protection for The 21st Century™*

The **Times Protect™** LP-BTR high performance surge arrestor series addresses applications in the 20MHz-1000MHz spectrum. Our unique DC blocking technology employed in this design provides optimum isolation of the antenna port from the protected equipment port for maximum surge protection. LP-BTR surge protectors have exceptional RF performance and are constructed from the highest quality materials for unsurpassed durability and longevity. These units meet and surpass all applicable industry standards.

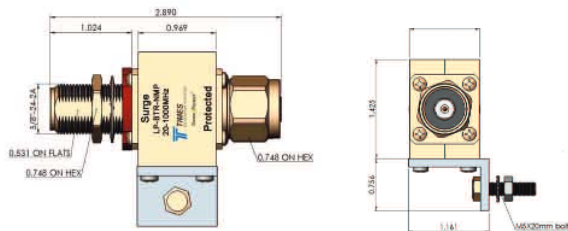
The LP-BTR product family is available with N connector configurations to satisfy various installation requirements.

#### LP-BTR Series:

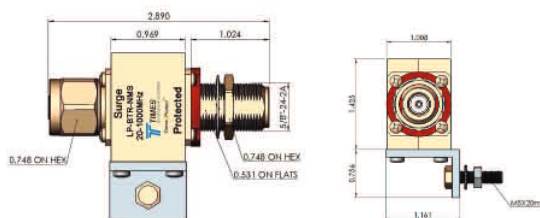
- LP-BTR-NFF  
N Female connectors on surge and protected sides
- LP-BTR-NMP  
N Male connector on protected side with N Female connector on surge side
- LP-BTR-NMS  
N Male connector on surge side with N Female connector on protected side



- LP-BTR-NFF  
20-1000MHz DC Blocked N Type F/F



- LP-BTR-NMP  
20-1000MHz DC Blocked N Type M on Protected



- LP-BTR-NMS  
20-1000MHz DC Blocked N Type M on Surge

\*All dimensions shown in inches

## Electrical Specifications

|                             |                                                            |
|-----------------------------|------------------------------------------------------------|
| Impedance                   | 50 $\Omega$                                                |
| Frequency Range             | 20-1000 MHz                                                |
| VSWR/Return Loss            | <1.1:1 / <-26dB                                            |
| Insertion Loss              | < 0.1dB                                                    |
| Impulse Discharge Current   | 10KA multiple (8x20 $\mu$ s wave-form)                     |
| Turn-on Voltage             | 600V $\pm$ 20%                                             |
| Turn-on Time                | 2.5ns for 2kV/ns                                           |
| Energy Throughput Rating    | <200 $\mu$ J (4kV/2kA 1.2x50/8x20 $\mu$ s wave-form)       |
| Power Handling at Frequency | 375W (20-220MHz)<br>125W (220-700MHz)<br>50W (700-1000MHz) |
| Protection Circuit          | DC Blocked                                                 |

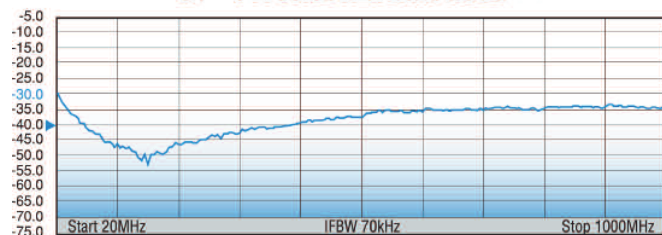
## Mechanical / Environmental Specifications

|                                 |                                  |
|---------------------------------|----------------------------------|
| Temp Range Storage/Operating    | -40°C - +85°C / -40°C - +50°C    |
| Weatherization                  | Required for external use        |
| Thermal Shock                   | US MIL-STD 202, Meth.107, Cond.B |
| Vibration                       | US MIL-STD 202, Meth.204, Cond.B |
| Shock                           | US MIL-STD 202, Meth.213, Cond.I |
| RoHS Compliant                  | Yes                              |
| Mating Life Cycle               | > 500                            |
| Recommended Coupling Nut Torque | 7 to 10 lb-in                    |

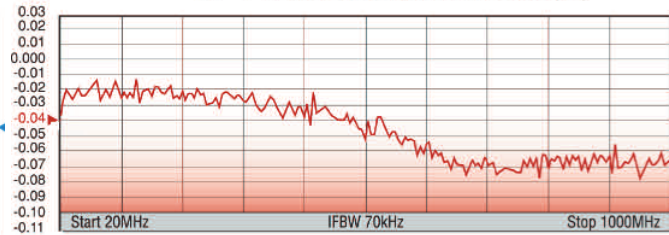
## Material Specifications

| Component              | Material        | Plating      |
|------------------------|-----------------|--------------|
| Body                   | Brass           | White Bronze |
| Inner Conductor Male   | Brass           | Silver       |
| Inner Conductor Female | Phosphor Bronze | Silver       |
| Outer Conductor        | Brass           | White Bronze |
| Coupling Nut           | Brass           | White Bronze |
| Insulator              | PTFE            | --           |

S11 TYPICAL RETURN LOSS (dB)



S21 TYPICAL INSERTION LOSS (dB)



World Headquarters: 358 Hall Avenue, Wallingford, CT 06492 • Tel: 203-949-8400, 1-800-867-2629 • Fax: 203-949-8423  
 International Sales: 4 School Brae, Dysart, Kirkcaldy, Fife, Scotland KY1 2XB UK • Tel: +44(0)1592655428  
 China Sales: No. 318 Yuan Shan Road, Shanghai 201108 China • Tel: 86-21-51761234 • Fax: 86-21-64424098  
[www.timesmicrowave.com](http://www.timesmicrowave.com)