

TimesTMProtect

LP-GTR-D Series

- DC Pass Multi-Strike Design
- Replaceable Gas Tube
- Broadband Bidirectional Design
- Excellent IL/RL Performance Over the Entire Operating Frequency Band
- Fully Weatherized Housing
- Solid Brass Construction for Durability and Long Life
- Includes Universal Right Angle Bracket Adaptor



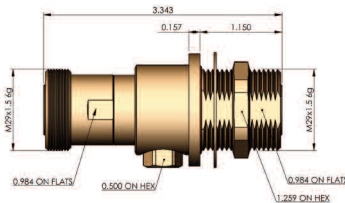
Lightning and Surge Protection for The 21st CenturyTM

The **Times -ProtectTM** LP-GTR-D series is an exceptional broadband DC pass design for lightning protection applications requiring DC power to be supplied to the electronics. Offering outstanding surge performance the LP-GTR-D series is the perfect protection solution for distributed antenna systems, tower mounted amplifiers, GPS systems and other applications requiring DC pass circuitry. These devices exhibit outstanding RF performance with high surge current handling characteristics and cover a broad range of power handling requirements from 50 to 550 watts. Its fully weatherized housing meeting IP67 standard allows for outdoor as well as indoor installation. The 716 DIN connector types can be used from DC through 2500MHz.

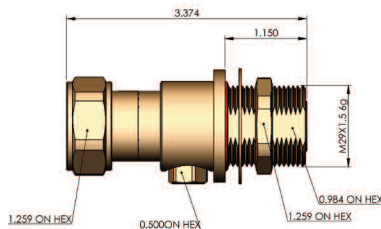


LP-GTR-D Series:

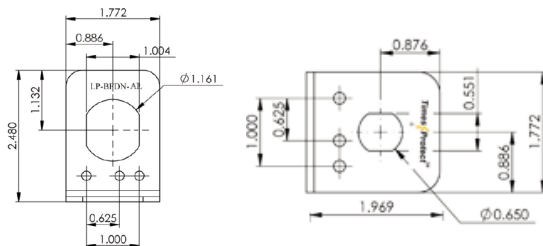
- LP-GTR-DFF (90Vdc/50W)
- LP-GTR-DFF-23 (230Vdc/210W)
- LP-GTR-DFF-35 (350Vdc/550W)
716 DIN Female connectors on both sides - bidirectional
- LP-GTR-DFM (90Vdc/50W)
- LP-GTR-DFM-23 (230Vdc/210W)
- LP-GTR-DFM-35 (350Vdc/550W)
716 DIN Male connector on one side & 716 DIN Female connector on the other side - bidirectional



- LP-GTR-DFF
 - LP-GTR-DFF-23
 - LP-GTR-DFF-35
- DC Pass DIN Type F/F



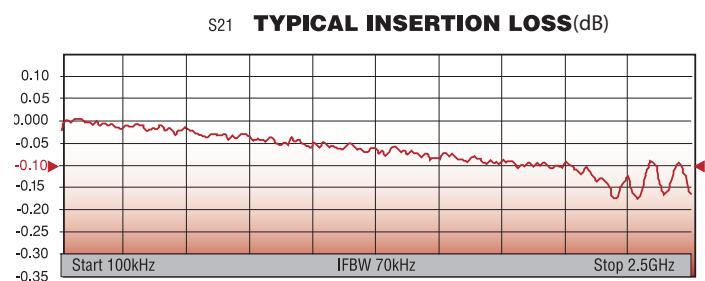
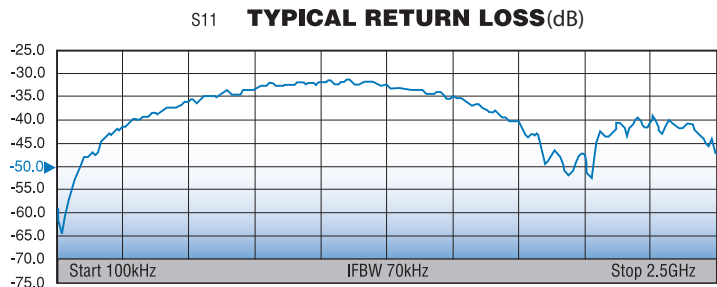
- LP-GTR-DFM
 - LP-GTR-DFM-23
 - LP-GTR-DFM-35
- DC Pass DIN Type F/M



- Universal Right Angle Bracket Adaptor

*All dimensions shown in inches

Electrical Specifications			
Impedance		50 Ω	
Frequency Range		DC-2500 MHz	
VSWR/Return Loss		< 1.08:1 / <-28dB (DC to 1000MHz) < 1.1:1 / <-26dB (1000 to 2500MHz)	
Insertion Loss		< 0.1dB (DC-1000MHz) < 0.2dB (1000-2500MHz)	
Maximum Surge Current		20kA multiple (8x20μs wave-form)	
Part Number: LP-GTR-	DFF/DFM	DFF-23/DFM-23	DFF-35/DFM-35
Impulse Sparkover	500V (1kV/μs)	700V (1kV/μs)	800(1kV/μs)
Turn-on	90Vdc	230Vdc	350Vdc
Average Power	50 Watts	210 Watts	550 Watts
Protection Circuit	DC Pass		
Mechanical / Environmental Specifications			
Temp Range Storage/Operating		-40°C - +85°C	
Weatherization		IEC 60068 40/085/21 & IP 67	
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	
Wear/Mating Cycles		500 minimum	
Recommended Coupling Nut Torque		220 to 300 lb-in	
Material Specifications			
Component	Material	Plating	
Body	Brass	White Bronze	
Inner Conductor Male	Brass	Silver	
Inner Conductor Female	Phosphor Bronze	Silver	
Washer	Brass	White Bronze	
Coupling Nut	Brass	White Bronze	
Insulator	TPX	--	
O-Ring	Silicone Rubber	--	

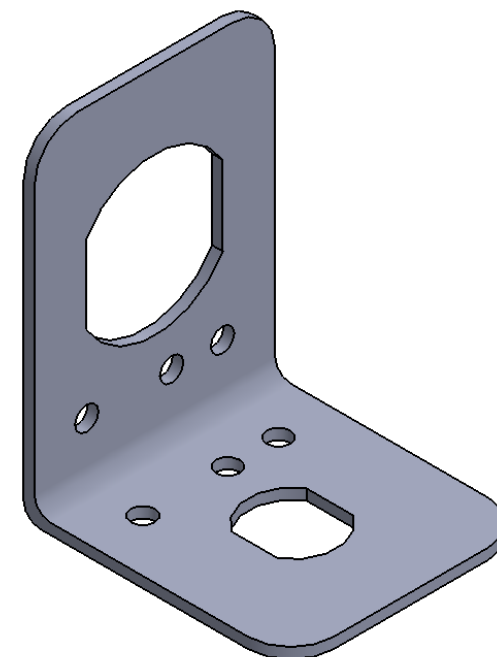
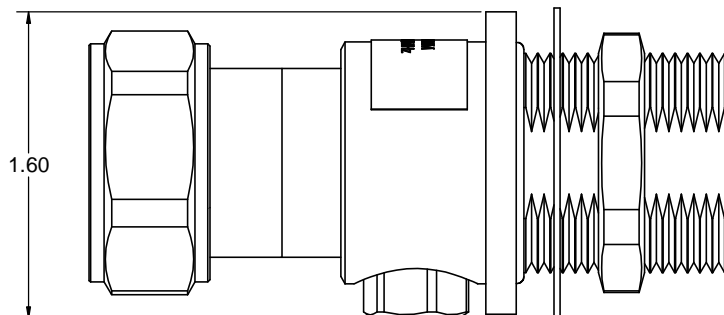
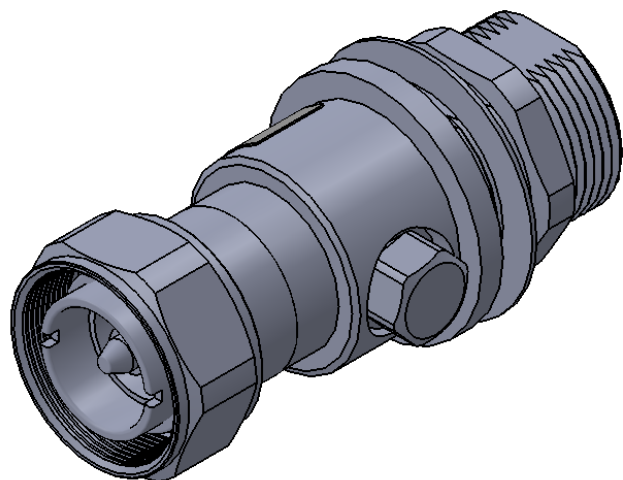


World Headquarters: 358 Hall Avenue, Wallingford, CT 06492 • Tel: 203-949-8400, 1-800-867-2629 • Fax: 203-949-8423
 International Sales: 4 School Brae, Dysart, Kirkcaldy, Fife, Scotland KY1 2XB UK • Tel: +44(0)1592655428
 China Sales: No. 318 Yuan Shan Road, Shanghai 201108 China • Tel: 86-21-51761234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

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REV.	REVISION DESCRIPTION	DFTM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	M.E.	03/24/14	M.E.	03/24/14



NOTES:

1. ELECTRICAL PERFORMANCE

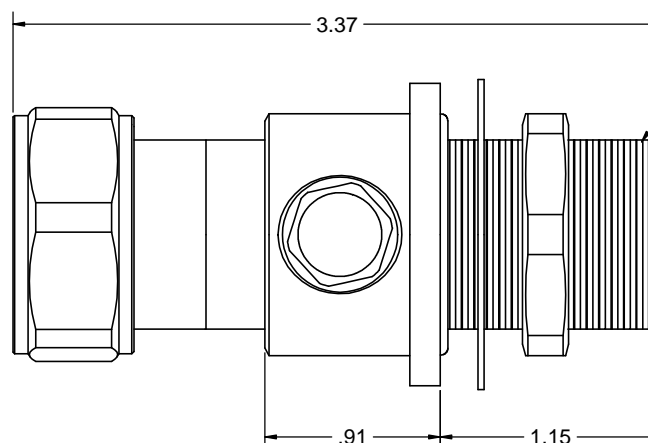
IMPEDANCE: 50 OHMS
 OPERATING FREQUENCY: DC-2500 MHz
 VSWR/RETURN LOSS: < 1.08:1 / < -28 dB (DC-1000 MHz)
 < 1.1:1 / < -24 dB (1000-2500 MHz)
 INSERTION LOSS: < 0.1 dB (DC-1000 MHz)
 < 0.2 dB (1000-2500 MHz)
 AVERAGE POWER: 50 W
 MAX SURGE CURRENT: 20 kA MULTIPLE (8/20 us WAVE-FORM)
 IMPULSE SPARKOVER: 500 V (1 kV/us)
 TURN ON: 90 Vdc
 PROTECTION CIRCUIT: DC PASS, BIDIRECTIONAL

2. ENVIRONMENTAL CHARACTERISTICS

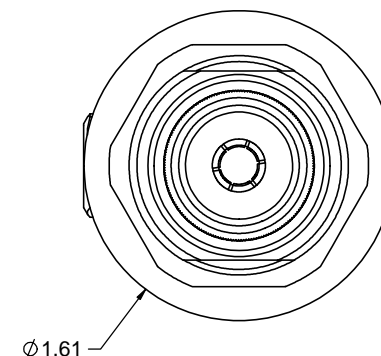
STORAGE/OPERATING TEMPERATURE: -40C TO +85C
 WEATHERIZATION: IP67
 VIBRATION: MIL-STD 202, METHOD 204, CONDITION B
 RoHS COMPLIANT

3. MATERIAL AND FINISH

INNER CONNECTOR FEMALE: PHOSPHOR BRONZE, SILVER PLATE
 INNER CONNECTOR MALE: BRASS, SILVER PLATE
 BODY: BRASS, WHITE BRONZE PLATE
 INSULATOR: TPX
 COUPLING NUT: BRASS, WHITE BRONZE PLATE
 O-RING: SILICONE RUBBER



M29 X 1.5




Ø1.61

MATERIAL:



USED ON ASSY.

DRAFTSMAN	M. ELLIS	03/24/14	TIMES MICROWAVE SYSTEMS			
CHECKER	M. ELLIS	03/24/14				
APPROVED	M. ELLIS	03/24/14				
UNLESS OTHERWISE SPECIFIED			TITLE: SURGE PROTECTOR DIN MALE TO DIN FEMALE DC-2500 MHz			
ALL DIMENSIONS ARE IN INCHES						
MACHINED SURFACES FINISH 32 RMS MAX. REMOVE ALL BURRS .005 MAX. BREAK MACHINE CORNERS .005 MAX. FILLET R.						
TOLERANCES ON DECIMALS			DWG. NO.  LP-GTR-DFM REV. A			
.XX ± .01 .XXX ± .005						
ANGLES ± 1° FRACTIONS ± 1/32						
DO NOT SCALE DRAWING						
CODE IDENT 68999						
			SCALE: 2:1		SHEET 1 OF 1	