

WILLIAMS FIRE SPRINKLER COMPANY, INC.



FIRE PROTECTION SYSTEMS

SECURITY ALARM SYSTEMS

MAILING ADDRESS

P.O. Box 1048 - Williamston, N.C. 27892
Phone #: 252-792-8196 - Fax #: 252-792-6603

PHYSICAL ADDRESS

14677 US Highway 64 - Williamston, N.C. 27892
Web Site: www.williamsfiresprinkler.com

SAVING LIFE AND PROPERTY SINCE 1972

BDA (DAS) RADIO ENHANCEMENT SYSTEM
PRODUCT SUBMITTALS
FOR:

HARNETT COUNTY SCHOOLS – CENTRAL OFFICE RENOVATION
601 South Main Street
Lillington, NC. 27546



“Good People Doing Good Things For Life And Property”

FLEX Series BDA PS700-PS800 Digital Signal Boosters

HONBDA-A-7S27B & HONBDA-D-7S27B

Product Features

- Supports Public Safety 700 & 800MHz dual band version
- FirstNet™ Band 14 available
- Upgradeable options: Class B to Class A & 0.5W/27dBm to 2W/33dBm
- Fully digital, FPGA-based
- Auto Diagnostic
- Automatic gain control per band; Per channel and per time slot on channel selective mode
- Oscillation detection with alarm and auto-shutdown
- Antenna Isolation measurement feature
- Antenna Isolation Alarm
- Weatherproof enclosure, NEMA4
- NFPA compliant with dry contact alarms
- Uplink and downlink squelch, per channel and per time slot on channel selective mode
- Assisted GUI wizard with Automatic Calibration features (Patent Pending) to reduce the uplink noise
- User adjustable gain control, UL and DL independent, per band, per channel and per time slot on channel selective mode
- 3-years Warranty
- Buy American Compliant: Meets the definition of Domestic Construction Material under the Buy American Act
- FCC (Federal Communications Commission-US)
- IC Approved
- IFC 2015, 2018, 2021 Edition Standards
- ISO 9001 Compliant
- NFPA 72 2013 Edition, NFPA 1221 2016 2019 Edition
- RoHS Compliant
- UL2524 2nd Edition Listing with SGS, Nationally Recognized Testing Laboratory (NRTL) approved by OSHA for UL2524.SGS-C US



Applications

- For P25 Phase I & Phase II, DMR, NXDN and Conventional Systems
- Indoor coverage: buildings, schools, hospitals, casinos, tunnels, metro stations
- Outdoor coverage: oil rigs, stadiums, dense urban areas, rural areas

| Specification | Value |
|----------------------------|---|
| Type | Dual Band Digital Signal Booster |
| Frequency Range | 758-775 / 788-805 MHz or 764-776 / 794-806 MHz (software adjustable) & 806-824 / 851-869MHz |
| Passband BW. min | 100KHz to full band or Channel Selective (After Upgrade to Class A) |
| Number of Passband | 2 BWA per band or 32 channel filters + 2 BWA per band (After Upgrade to Class A) |
| Channel Filter Options | 150KHz, 100KHz, 75KHz, 62.5KHz, 50KHz, 37.5KHz, 25KHz and 12.5KHz (After Upgrade to Class A) |
| BWA Filters | Adjustable from 100KHz to full band in step in steps of 50KHz |
| Gain, maximum | 85 dB |
| Passband ripple | +/- 2.0 dB |
| Gain, manual control | 30dB range, digitally controlled in 1dB steps, per link, per band |
| Antenna isolation | Max Gain + 20dB |
| Composite output power, DL | +27dBm or +33dBm (After Upgrade to 2W) per band |
| Composite output power, UL | +27dBm |
| IMD | < -13dBm |
| Noise Figure | 9.0dB max |
| Group Delay | Band Selective: 3.5 to 6.5µS, depending on BWA <ul style="list-style-type: none"> • Or After Class A upgrade • Channel Selective 150KHz, 11.5µS • Channel Selective 100KHz, 13.5µS • Channel Selective 75KHz, 16.0µS • Channel Selective 62.5KHz, 18.0µS • Channel Selective 50KHz, 21.0µS • Channel Selective 37.5KHz, 25.5µS • Channel Selective 25KHz, 35.0µS • Channel Selective 12.5KHz, 61.5µS |

LICENSE NUMBER

EXPIRATION DATE

SP.FA/LV.32978

BOARD OF EXAMINERS OF ELECTRICAL CONTRACTORS

01/27/2024

STATE OF NORTH CAROLINA

THIS IS TO CERTIFY THAT:

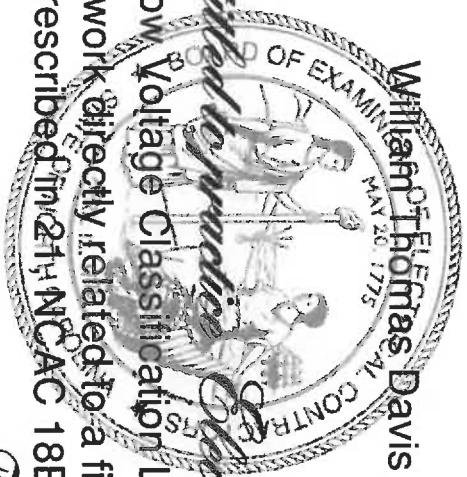
Williams Fire Sprinkler Inc.-Automatic Fire Systems

is duly registered and entitled to practice Electrical Contracting in the

Special Restricted Fire Alarm/Low Voltage Classification License

Limitation: Limited to electrical work directly related to a fire alarm, burglar alarm or low voltage system installation as prescribed in 24 NCAC 18B .0804

Witness our hands and seal of the Board



Williams Fire Sprinkler Inc.-Automatic Fire

P.O. Box 1048

Williamston, NC 27892

David S.

Chairman

Quinn Brown

Secretary - Treasurer

FLEX Series BDA

PS700-PS800-Digital Signal Boosters

HONBDA-A-7S27B & HONBDA-D-7S27B

| Specification | Value |
|---|--|
| Maximum input power, no damage | +5dBm (UL), +5dBm (DL) |
| Maximum input power, normal operation | 0dBm (UL), 0dBm (DL) |
| Connectors | N(f) as standard |
| RF Input/Output impedance | 50Ω |
| Uplink squelch function | Yes, user selectable, to avoid UL noise when no carriers present, per band, per time slot and per channel (on Class A mode) |
| Self-diagnostic platform | Microprocessor based |
| Alarms | Yes, amplifiers status, power amplifiers status, power supply failure, temperature, AGC, RF overload, donor antenna failure, VSWR Indoor, oscillation. |
| Local management and supervising | Local access via USB |
| RoHS compliance | Yes |
| Power Supply | AC 110 VAC, 50/60 Hz or DC +24VDC (depending on configuration) |
| Power Consumption | 65W or 80W (After Upgrade to 2W) |
| Housing | NEMA 4 |
| Temperature Range | -13° to 131° F • -25° to +55° C |
| Cooling | Natural convection |
| Weight | 52.9 lbs • 24 kg |
| Dimension | 17.7 x 17.3 x 5.1 in • 450 x 440 x 130 mm |
| Mounting | Wall or pole mounting (Rack mounting option available) |
| MTBF | 250,000 hours |
| FCC ID for HONBDA-A & HONBDA-D "Class B" P3TDH7S-00X | |
| FCC ID for HONBDA-A & HONBDA-D "Class A" P3TDH7S-00XA | |

* Value valid for non duplexed units. This value can change depending on the filtering insertion loss of the duplexer.

WARNING: This is NOT a CONSUMER device. It is designed for installation by the FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENSE or express consent of an FCC Licensee to operate this device. Unauthorized use may result in significant forfeiture penalties, including penalties in excess of \$100,000 for each continuing violation.

Ordering Information

HONBDA-A-7S27B: 0.5W/27dBm, 800 + 700 + FirstNet CLASS B, Upgradeable to Class A, 2W/33dBm options, AC

HONBDA-D-7S27B: 0.5W/27dBm, 800 + 700 + FirstNet CLASS B, Upgradeable to Class A, 2W/33dBm options, DC

Upgraded License Part Numbers

BDA-LIC-D27B-D27A: From 0.5W/27dBm Class B to 0.5W/27dBm Class A (HONBDA-A-7S27A & HONBDA-D-7S27A)

BDA-LIC-D27B-D33B: From 0.5W/27dBm Class B to 2W/33dBm Class B (HONBDA-A-7S33B & HONBDA-D-7S33B)

BDA-LIC-D27B-D33A: From 0.5W/27dBm Class B to 2W/33dBm Class A (HONBDA-A-7S33A & HONBDA-D-7S33A)

BDA-LIC-D27A-D33A: From 0.5W/27dBm Class A to 2W/33dBm Class A (HONBDA-A-7S33A & HONBDA-D-7S33A)

BDA-LIC-D33B-D33A: From 2W/33dBm Class B to 2W/33dBm Class A (HONBDA-A-7S33A & HONBDA-D-7S33A)

STANDARDS AND CODES

The HONBDA-A/D-7S27B units comply with the following standards and codes.

- Buy American Compliant: Meets the definition of Domestic Construction Material under the Buy American Act
- FCC (Federal Communications Commission-US)
- IC Approved
- IFC 2015, 2018, 2021 Edition Standard
- NFPA 72 2013 Edition, NFPA 1221 2016 2019 Edition Standard
- ROHS Compliant
- SGS C-UL Compliant
- UL2524 2nd Edition Standard with SGS, Nationally Recognized Testing Laboratory (NRTL) approved by OSHA for UL2524

Fiplex

2101 NW 79th Avenue,
Miami, FL 33122
305 884-8991

www.fiplex.com

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BATTERY BACKUP SYSTEMS

HONBDA-BTTY-100xxx

Product Features

- NFPA Compliant
- Up to 24 hour version
- AC Input, 24 Volt DC Output
- NEMA-4 Rated BBU Enclosure
- Up to 4 Annunciators may be connected to one BBU
- Tamper Proof with Lock and Key Accessibility
- Flush Wall Mounted Annunciators
- IFC & NFPA compliance; UL2524 2nd Edition
- Country of Origin: USA
- 3-year warranty (excluding batteries)
- Common Battery Backup Systems to support BDA, Fiber DAS Master/Remote



| Specification | Value |
|---------------|---------------------|
| Type | Battery Backup Unit |
| Input | 120 VAC 50/60 Hz |
| Size | 24 x 20 x 10 in |

| Specifications | BTTY-100050 |
|-----------------------------|--|
| Storage capacity | 100W / 12hs |
| Annunciator | AC Power Normal AC Power Failure Battery Capacity <30% Battery Charger Fail Donor Antenna Disconnection Donor Antenna Malfunction RF Emitter Fail System Component Fail |
| Max Load | 270 W (contact Honeywell for battery duration at different loads) |
| Batteries | Included |
| BDA Annunciator | Built in, port for additional external annunciators |
| Weight (batteries included) | 150lbs |

| Specifications | BTTY-100100 |
|------------------|--|
| Storage capacity | 100 W / 24 hs or 200 W / 12 hs |
| Annunciator | AC Power Normal AC Power Failure Battery Capacity <30% Battery Charger Fail Donor Antenna Disconnection Donor Antenna Malfunction RF Emitter Fail System Component Fail |
| Max Load | 270 W (contact Honeywell for battery duration at different loads) |

BATTERY BACKUP SYSTEMS

HONBDA-BTTY-100xxx

| | |
|-----------------------------|---|
| Batteries | Included |
| BDA Annunciator | Built in, port for additional external annunciators |
| Weight (batteries included) | 210lbs |

| | |
|------------------|--|
| Specifications | BTTY-100050N |
| Storage capacity | 100W / 12hs |
| Annunciator | AC Power Normal AC Power Failure Battery Capacity <30% Battery Charger Fail Donor Antenna Disconnection Donor Antenna Malfunction RF Emitter Fail System Component Fail |
| Max Load | 270 W (contact Honeywell for battery duration at different loads) |
| Batteries | Not Included |
| BDA Annunciator | Built in, port for additional external annunciators |
| Weight | 30lbs |

| | |
|------------------|--|
| Specifications | BTTY-100100N |
| Storage capacity | 100 W / 24 hs or 200 W / 12 hs |
| Annunciator | AC Power Normal AC Power Failure Battery Capacity <30% Battery Charger Fail Donor Antenna Disconnection Donor Antenna Malfunction RF Emitter Fail System Component Fail |
| Max Load | 270 W (contact Honeywell for battery duration at different loads) |
| Batteries | Not Included |
| BDA Annunciator | Built in, port for additional external annunciators |
| Weight | 72lbs |

| Battery Models | Description |
|----------------|---|
| BDA-BTTY-12-1 | Replacement Battery for 55AH BBU, single unit (2 batteries required) |
| BDA-BTTY-24-1 | Replacement Battery for 100AH BBU, single unit (2 batteries required) |

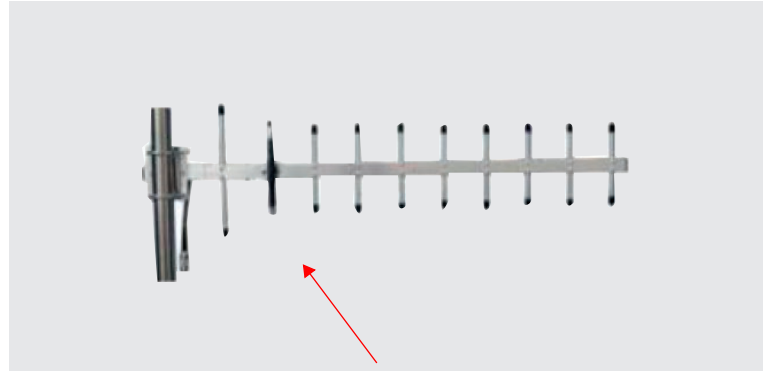
DOC HON-62066.02 - 12152020 - FS

OUTDOOR YAGI ANTENNA 698-869 MHz

BDA-YDA763869-14-1

Product Features

- PS700 & PS800 full band
- High Directivity
- Max Power 100W



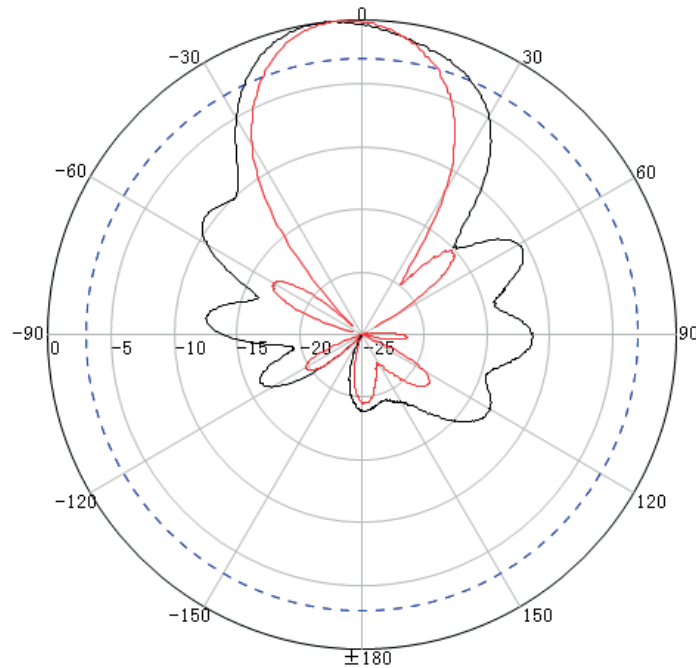
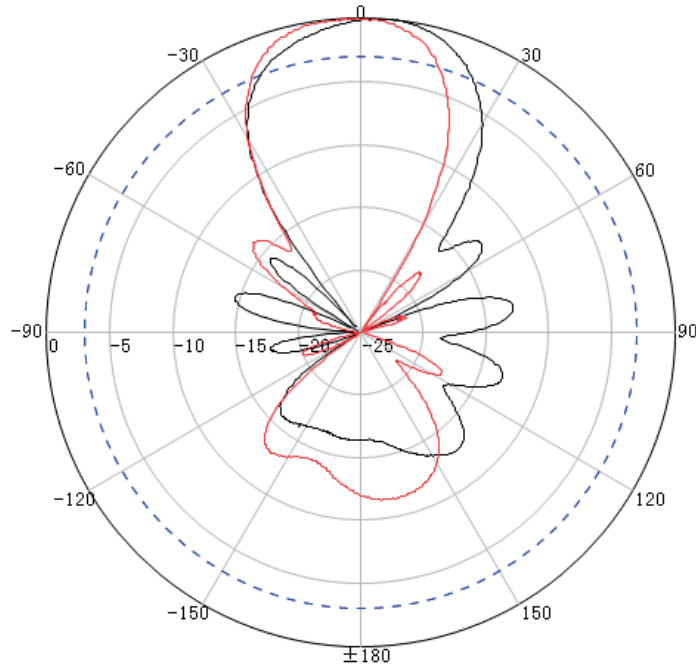
| Electrical Specifications | Value |
|-------------------------------|------------------------|
| Frequency Range | 698-869 MHz |
| F/B Ratio | > 18 dB |
| Gain | 14 dBi |
| VSWR | ≤1.5 |
| Radiation | Direction |
| Polarization | Vertical or Horizontal |
| Horizontal Beamwidth | 40° |
| Vertical Beamwidth | 32° |
| Input Impedance | 50 Ω |
| Max. Input Power | 100 W |
| Lightning Protection | DC Ground |
| Cable Type | RG58U |
| Cable Length | 30cm |
| Mount way | Pole |
| Diameter of Installation Pole | Ø30~Ø50mm |

| Mechanical Specifications | Value |
|---------------------------|-----------------|
| Connector | N Female |
| Max wind | 130 miles/hour |
| Dimensions | 1100x230x45mm |
| Weight | 0.90 kg |
| Color | White |
| Radome Material | Aluminum Alloy |
| Operating Temperature | -40°C to +65 °C |

OUTDOOR YAGI ANTENNA 698-869 MHz

BDA-YDA763869-14-1

Radiating Patterns



DOC HON62098.02 - 03262021 - D/M/C

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715 Peachtree Street NE
Atlanta, GA 30308
www.honeywell.com

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Country of origin: U.S.A.

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COAXIAL SURGE PROTECTOR DC-7GHz

BDA-P8AX09-6G-N/FF

Product Features

- RF coaxial surge protector
- DC-7 GHz
- 70 W
- Connectors : N
- Low insertion loss
- Removale GDT
- DC-pass
- Bi-directional protection

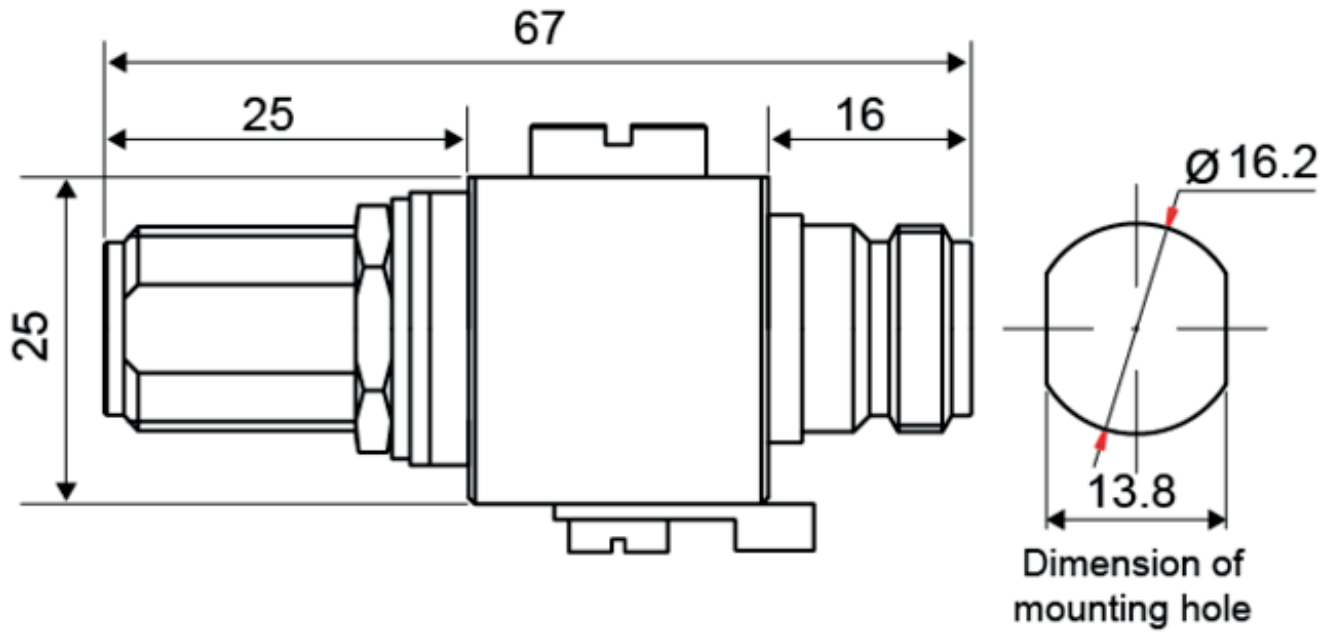


| Electric Specifications | Value |
|---|-------------|
| Frequency range | DC-7 GHz |
| Insertion loss | < 0.2 dB |
| Return loss | > 19 dB |
| Impedance | 50 ohms |
| VSWR | <1.25:1 |
| Max. load current | 10 A |
| Operating current(Continuous current at Uc) | None |
| Max. discharge current(max. withstand @ 8/20 μs by pole) | 20 kA |
| Protection mode(s) | Common mode |
| Protection level (@ In (8/20μs) | < 1100 V |
| Impulse current(2 x 10/350μs Test - D1 Category) | 1 kA |
| Nominal discharge current(8/20μs Test x 10 - C2 Category) | 5 kA |
| Max Power | 70 W |
| Typical let through energy (50 ohms) input 4kV 1.2/50μs - 2kA 8/20μs) | 2.2 mJ |
| DC Pass | true |
| Insulation resistance | ≥10 GOhms |

| Mechanical Specifications | Value |
|---------------------------|----------------------------------|
| Technology | Gas discharge tube |
| Connection to Network | connector N Female/Female |
| Mounting | Feedthrough |
| Housing material | Brass/Surface plating : Cu Zn Sn |
| Operating temperature | -40/+85°C |
| Protection rating | IP66 |
| Outdoor application | Yes |
| Failsafe mode | Short-circuit |
| Disconnection indicator | Transmission interrupt |
| Spare module(s) | 2 x BA HF - 90/20 |
| Contacts | Bronze/Surface Au-Ag |
| Weight | 0.165 kg |

COAXIAL SURGE PROTECTOR
DC-7GHz

BDA-P8AX09-6G-N/FF



DOC HON-62115.00 - 11122020 - DMC

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Atlanta, GA 30308
www.honeywell.com

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HIGH POWER DIRECTIONAL COUPLER

698 - 2690 MHz

BDA-DCxx-W2

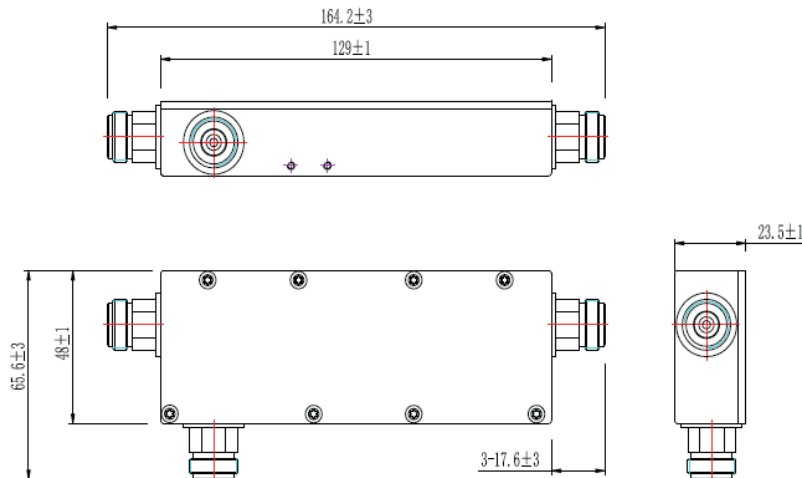
Product Applications

Fiplex RSA Series of RF Directional Couplers are passive devices designed to provide unequal power distribution to the output ports.

Due to the internal configuration, this devices have a low VSWR value in all ports (less than 1.3:1, based on 50 ohms characteristic impedance) and low incidental insertion loss. Standard coupling values are 6dB, 10dB, 15dB, 20dB and 30dB, other power ratios available upon request.



| Specification | Value | | | | | |
|-----------------------|-------------------------|--------|---------|---------|---------|---------|
| Product Number | DC6-W2 | DC8-W2 | DC10-W2 | DC15-W2 | DC20-W2 | DC30-W2 |
| Coupling(dB) | 6 | 8 | 10 | 15 | 20 | 30 |
| Accuracy(dB) | ±0.8 | ±0.8 | ±1.0 | ±1.2 | ±1.2 | ±1.5 |
| Insertion Loss(dB) | ≤1.75 | ≤1.30 | ≤0.80 | ≤0.50 | ≤0.40 | ≤0.40 |
| Isolation | ≥26 | ≥28 | ≥28 | ≥32 | ≥35 | ≥45 |
| Freq | 698 - 2690 MHz | | | | | |
| VSWR | ≤1.25 | | | | | |
| Power Rating | 300W (average Per Port) | | | | | |
| Impedance | 50 ohm | | | | | |
| Connector | N-female | | | | | |
| Color | Red-plated | | | | | |
| Operating Temperature | -25°C to +75°C | | | | | |
| Weight | 0.38 kg | | | | | |



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 715 Peachtree Street NE
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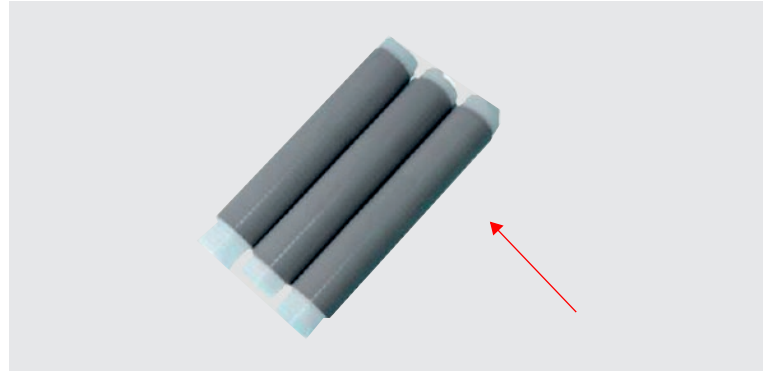
Honeywell

WEATHERPROOFING SILICONE COLDSHRINK FOR EOL ASSEMBLY, 9.8"L

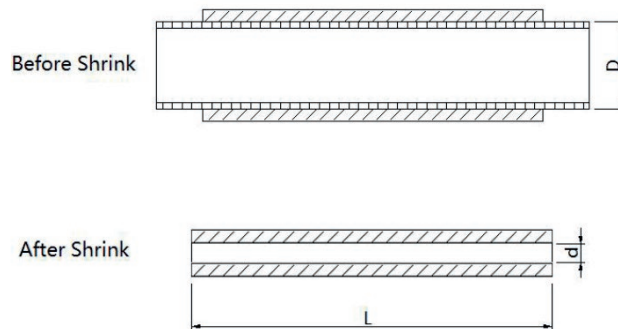
BDA-WPK-ATBC40_01

Product Features

- Silicone Rubber
- Flame Retardant UL94-HB
- Extra duration
- Weatherproof Silicon Rubber



| Specifications | Value |
|--------------------------|------------------------------|
| Material | Silicone Rubber |
| Hardness, Shore A | 35 - 45 |
| Specific Gravity (25 °C) | 1.08 1.16 |
| Color | Grey (Pantone 431U) |
| Flame Retardant | UL94-HB |
| Tensile Strength | ≥ 7.0 MPa (23 °C ASTM D412) |
| Elongation | ≥ 650% (23 °C ASTM D412) |
| Tear Strength | ≥ 25 KN/m (23 °C ASTM D 624) |
| Temperature Range | -6 0 °C 200 °C |
| Ozone Resistance | 70h, ASTM D518-A |
| UV Resistance | 1000h, ISO4892.3 Cycle1 |
| Mold Resistance | IEC60068-2-10 , Class 1 |
| Hose Clamp | Includes 2 (16-25 mm) |
| Life Time | 20 Years |
| IP Grade | IPx8 (IEC 60529) |
| Dimensions | 40 x 10 x 250 mm |



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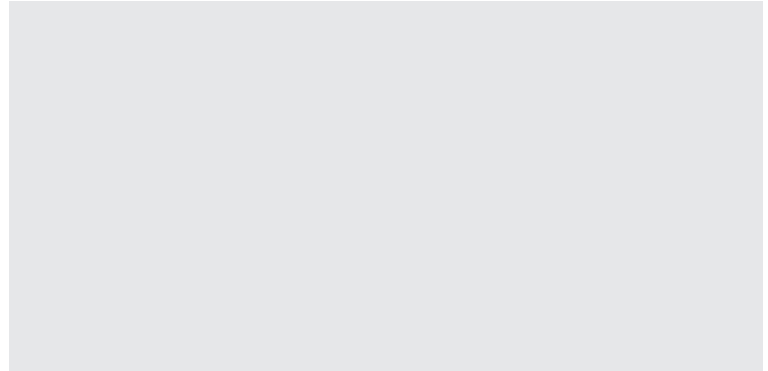
Honeywell

JUMPER 1/4" S N male and N male

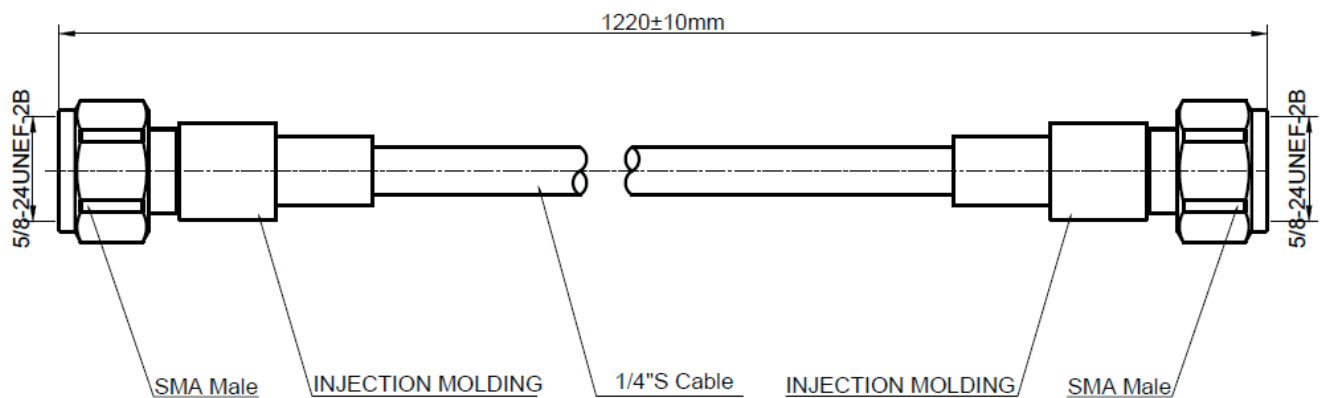
BDA-NM-RG8-13-NM

Product Features

- Low VSWR
- Low Insertion Loss
- Robust Design



| Specification | Value |
|---------------------------|-------------------------------|
| Connector | N Male both ends |
| Type of Cable | 1/4" SUPERFLEX |
| Length of cable | 48 Inch |
| Center conductor material | Brass - Silver Plating |
| Insulator material | PTFE |
| Body connector material | Brass - Ternary alloy plating |
| IMmpedance | 50 Ohms |
| Frequency range | 0 - 6 GHz |
| VSWR | 1.2 (0-3.8GHZ) |
| PIM | <= -160DBC@1800MHZ |



INDOOR OMNI CEILING ANTENNA 698-869 MHz

BDA-OIA-698869-3-1

Product Features

- PS700 & PS800 full band
- Omni Directional Ceiling Antenna
- Max Power 100W



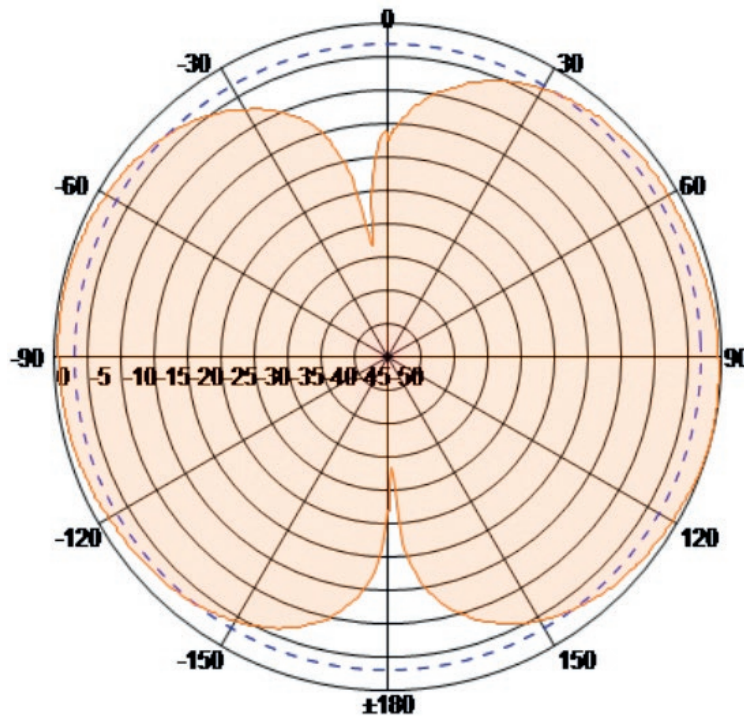
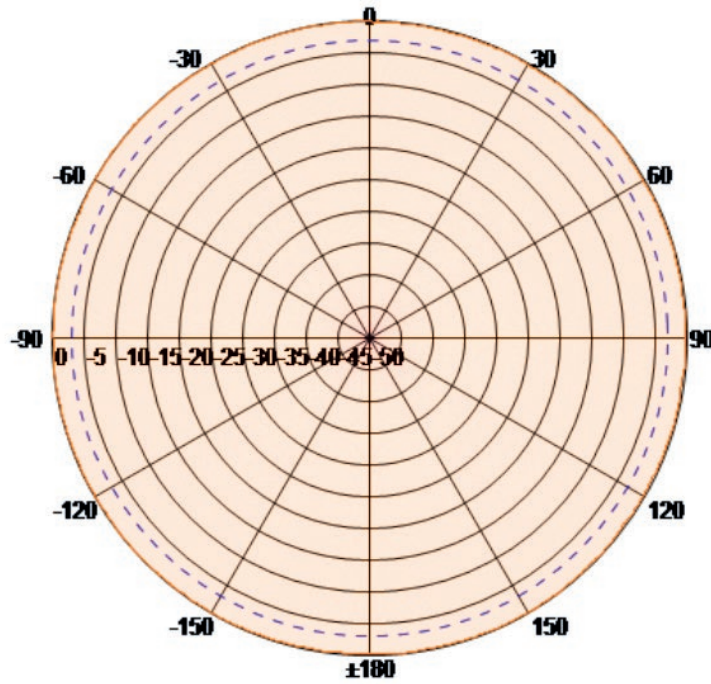
| Electrical Specifications | Value |
|---------------------------|-------------|
| Frequency Range | 698-869 MHz |
| Gain | 3 dBi |
| VSWR | ≤1.5 |
| Polarization | Vertical |
| Horizontal Beamwidth | 360° |
| Vertical Beamwidth | 55° |
| Input Impedance | 50 Ω |
| Max. Input Power | 100 W |
| Lightning Protection | DC Ground |

| Mechanical Specifications | Value |
|---------------------------|-----------------|
| Connector | N Female |
| Dimensions | Ø165*95mm |
| Weight | 0.25 kg |
| Color | White |
| Radome Material | ABS |
| Operating Temperature | -40°C to +65 °C |

INDOOR OMNI CEILING ANTENNA 698-869 MHz

BDA-OIA-698869-3-1

Radiation Patterns



DOC HON-62089.01 - 03262021 - DMC

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Honeywell

GROUNDING KIT FOR 1/2" COAXIAL CABLE, 500mm

BDA-GNDKIT1

Product Features

- For 1/2" RF Cable
- Copper cable
- PVC Jacket



| Product Structure Grounding Kit | Value |
|---------------------------------|---|
| Cable Kit | Copper, for 1/2" |
| Rivet | Copper |
| Locking Bail Material | Stainless steel |
| Grounding Cable | 16 mm ² Copper wire & PVC, Black |
| Cable Lug | Tin-Plated Copper(1 hole M8) |

| Product Structure Hardware | Value |
|----------------------------|-----------------------------|
| Hexagon Screw | A2 Stainless Steel, M8X25mm |
| Nut | A2 Stainless Steel, M8 |
| Spring Washer | A2 Stainless Steel, M8 |
| Washer | A2 Stainless Steel, M8 |

| General Specifications | Value |
|------------------------|----------------------|
| Cable Type | Corrugated |
| Cable Size | 1/2" & 1/2" Low Loss |
| Lug Type | One-hole lug |
| Lug Attachment | Factory attached |

| Cable Specifications | Value |
|--------------------------------------|--------------------|
| Bonding Conductor Length | 500mm |
| Bonding Conductor Material | Copper |
| Bonding Conductor Wire Size | 16 mm ² |
| Bonding Conductor Jacketing Material | PVC |

| Electrical Specifications | Value |
|--|---|
| Current Handling | Tested to withstand 100,000 amps peak current surge |
| Current Handling Test Method | MIL-STD-1757 |
| Grounding, Bonding and Shielding Test Method | MIL-STD-188-124A |
| Lightning Protection Test Method | IEC 1024-1 |

GROUNDING KIT FOR 1/2" COAXIAL CABLE, 500mm

| Environment Specifications | Value |
|---------------------------------|---------------------------|
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -40°C to +80°C |
| Immersion Depth | 1 m |
| Immersion Test Mating | Mated |
| Immersion Test Method | IEC 60529:2001, IP68 |
| Blowing Rain Test Method | MIL-STD-810, Method 506 |
| Corrosion Test Method | MIL-STD-1344, Method 1001 |
| Freezing Rain/Icing Test Method | MIL-STD-810, Method 521 |
| Humidity Test Method | MIL-STD-1344, Method 1002 |
| UV Resistance Test Method | MIL-STD-810, Method 505 |
| Vibration Test Method | IEC 60068-2-6:2007 |

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N (m) CONNECTOR 0 - 3GHz

NM-ICA12-50JPLL

Product Features

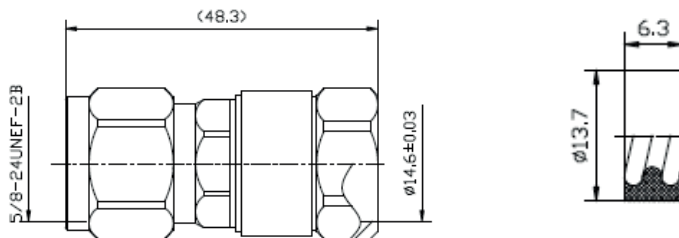
- N male connector
- For 1/2" cable



| Electrical Specifications | Value |
|---------------------------|----------------------|
| Impedance | 50Ω |
| Frequency range | 0~3GHz |
| Working Voltage | 1500V max |
| Withstand Voltage | 2500V rms |
| VSWR | Straight ≤ 1.2 |
| | Rigth Angle ≤ 1.3 |
| Contact resistance | center contact ≤ 1mΩ |
| | outer contact ≤ 1mΩ |
| Insulation resistance | ≥5000MΩ |

| Mechanical Specifications | Value |
|---------------------------|--------------|
| Temperature range | -35°C~+155°C |
| Durability(matings) | >500 |

| Material Specifications | Value |
|-------------------------|---------------------------------------|
| Body | Brass Tri-Metal or nickel |
| Center conductor | Phosphor Bronze Gold or silver plated |
| Coupling nut | Brass Nickel |
| Gasket | Silicone Rubber |
| Insulator | PTFE |



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Honeywell Business Solutions
715 Peachtree Street NE
Atlanta, GA 30308
www.honeywell.com

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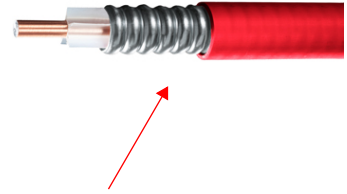


1/2" ClearFill®Line Aluminum Plenum-Rated Air-Dielectric Coaxial Cable for In-Building Applications

ClearFill®Line 1/2" low-loss air dielectric cable, Plenum-rated, CMP

FEATURES / BENEFITS

- ➔ **Supports Multiple RF Signals**
- ➔ **Complete Shielding**
The solid outer conductor of the ClearFill®Line coaxial cable creates a continuous RFI/EMI shield that minimizes system interference.
- ➔ **Outstanding Intermodulation Performance**
RFS coaxial cable's solid inner and outer conductors virtually eliminate intermods. Intermodulation performance is also confirmed with state-of-the-art equipment at the RFS factory.
- ➔ **Wide Range of Applications**
Typical areas of application are feedlines for plenum-space installations within occupied buildings or structures but also suitable for outdoor use due to jacket UV rating.



Technical Features

APPLICATIONS

| | |
|---------------------|--|
| Applications | Suitable for plenum in-building/public safety or outdoor usage |
|---------------------|--|

STRUCTURE

| | | |
|------------------------|---------|---|
| Cable Type | | Air-Dielectric, Corrugated |
| Size | | 1/2" |
| Inner Conductor | mm (in) | 4.8 (0.19) Copper-Clad Aluminum Wire |
| Dielectric | mm (in) | 11.8 (0.464) Extruded Polyethylene |
| Outer Conductor | mm (in) | 13.8 (0.54) Corrugated Aluminum |
| Jacket | mm (in) | 15.93 (0.627) Plenum Rated / Color Red UV rated to ASTM G155 |

ELECTRICAL SPECIFICATIONS

| | | |
|---------------------------------------|----------------------|--|
| Impedance | Ω | 50 +/- 1 |
| Maximum Frequency | GHz | 6.0 |
| Velocity | % | 91.0 |
| Capacitance | pF/m (pF/ft) | 75 (22.86) |
| Inductance | μH/m (μH/ft) | 0.19 (0.058) |
| Peak Power Rating | kW | 40.0 |
| RF Peak Voltage | Volts | 2000.0 |
| Jacket Spark | Volt RMS | 8000.0 |
| Inner Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 1.48 (0.45) |
| Outer Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 2.29 (0.7) |
| Return Loss (VSWR) Performance | | 19 (1.25) @ 450-960 MHz 19 (1.25) @ 1395-1432 MHz 19 (1.25) @ 1700-2155 MHz 19 (1.25) @ 2300-2500 MHz |
| Temperature & Power | | High Power Rating |

MECHANICAL SPECIFICATIONS

| | | |
|---|---------------|---------------------|
| Cable Weight, Nominal | kg/m (lb/ft) | 0.19 (0.13) |
| Minimum Bending Radius, Single Bend | mm (in) | 76 (3) |
| Minimum Bending Radius, Repeated Bends | mm (in) | 127 (5) |
| Bending Moment | Nm (lb*ft) | 5.4 |
| Tensile Strength | N (lb) | 549 (150) |
| Recommended / Maximum Clamp Spacing | m (ft) | 0.5 / 0.9 (1.8 / 3) |
| Crush Strength | kg/mm (lb/in) | 0.893 (50) |



1/2" ClearFill®Line Aluminum Plenum-Rated Air-Dielectric Coaxial Cable for In-Building Applications

ATTENUATION AND POWER RATING

| Frequency MHz | Attenuation | | Power kW |
|------------------|-------------|----------|-------------|
| | dB/100m | dB/100ft | |
| 0.5 | 0.16 | 0.05 | 40.00 |
| 1 | 0.23 | 0.071 | 32.80 |
| 1.5 | 0.28 | 0.087 | 26.80 |
| 2 | 0.33 | 0.101 | 23.20 |
| 10 | 0.74 | 0.226 | 10.30 |
| 20 | 1.06 | 0.322 | 7.22 |
| 30 | 1.30 | 0.395 | 5.89 |
| 50 | 1.68 | 0.514 | 4.55 |
| 88 | 2.25 | 0.687 | 3.40 |
| 100 | 2.41 | 0.734 | 3.18 |
| 108 | 2.51 | 0.764 | 3.05 |
| 150 | 2.98 | 0.907 | 2.57 |
| 174 | 3.22 | 0.98 | 2.38 |
| 200 | 3.46 | 1.05 | 2.21 |
| 300 | 4.29 | 1.31 | 1.79 |
| 400 | 5.00 | 1.52 | 1.53 |
| 450 | 5.32 | 1.62 | 1.44 |
| 500 | 5.63 | 1.72 | 1.36 |
| 512 | 5.71 | 1.74 | 1.34 |
| 600 | 6.22 | 1.90 | 1.23 |
| 700 | 6.76 | 2.06 | 1.14 |
| 750 | 7.02 | 2.14 | 1.09 |
| 800 | 7.28 | 2.22 | 1.06 |
| 824 | 7.40 | 2.25 | 1.04 |
| 894 | 7.74 | 2.36 | 0.993 |
| 900 | 7.76 | 2.37 | 0.99 |
| 925 | 7.88 | 2.40 | 0.976 |
| 960 | 8.05 | 2.45 | 0.955 |
| 1000 | 8.23 | 2.51 | 0.934 |
| 1250 | 9.32 | 2.84 | 0.826 |
| 1400 | 9.93 | 3.03 | 0.776 |
| 1500 | 10.30 | 3.15 | 0.749 |
| 1700 | 11.10 | 3.38 | 0.695 |
| 1800 | 11.50 | 3.49 | 0.671 |
| 2000 | 12.20 | 3.71 | 0.634 |
| 2100 | 12.50 | 3.81 | 0.619 |
| 2200 | 12.80 | 3.92 | 0.605 |
| 2300 | 13.20 | 4.02 | 0.587 |
| 2400 | 13.50 | 4.12 | 0.574 |
| 2500 | 13.80 | 4.22 | 0.562 |
| 2600 | 14.20 | 4.31 | 0.546 |
| 2700 | 14.50 | 4.41 | 0.535 |
| 3000 | 15.40 | 4.69 | 0.505 |
| 3500 | 16.90 | 5.14 | 0.461 |
| 3600 | 17.10 | 5.22 | 0.456 |
| 4000 | 18.30 | 5.56 | 0.427 |
| 4500 | 19.60 | 5.97 | 0.399 |
| 5000 | 20.90 | 6.36 | 0.376 |
| 5500 | 22.10 | 6.74 | 0.356 |
| 6000 | 23.30 | 7.11 | 0.339 |

Attenuation at 20°C (68°F) cable temperature;
tolerance +/- 5% max.; Mean power rating at
40°C (104°F) ambient temperature

TESTING AND ENVIRONMENTAL

| | |
|---------------------------------|--|
| Fire Performance | Flame Retardant, Plenum-rated, CMP |
| Regulatory Compliance | NEC Article 800 Communication Circuits ETL Listed to UL444 Canadian CSA C.22.2/FT6 |
| Installation Temperature | -20 to 60 (-4 to 140) °C(°F) |
| Storage Temperature | -40 to 85 (-40 to 185) °C(°F) |
| Operation Temperature | -40 to 85 (-40 to 185) °C(°F) |

External Document Links

Notes