

**158EIA-HCA78-020**

7/8" EIA Connector for 7/8" Coaxial Cable, RAPID FIT™ Sealing compound



Radio Frequency Systems line of high performance coaxial cable connectors are designed specifically to provide the highest quality connector-cable interface while simplifying and speeding up the attachment of connectors to HELIFLEX® coaxial cables. RFS connectors are fully tested for mechanical and electrical compliance specifications. They are available in all popular cable sizes in a variety of mating interfaces. To join two cables with EIA connectors, two identical socket connectors are installed on either end of the cables to be joined, and a coupling element is used to make the connection of the center conductor. The coupling element must be ordered separately. Connectors are available in sizes matching the nominal cable size. EIA connectors provide optimal power handling for the complete transmission line system.

**Features / Benefits**

- Excellent gas tightness, Overpressure for increased voltage handling is maintained throughout the system
- Robust Mechanical Design, Superior and consistent performance guarantees outstanding system characteristics.
- Extremely low reflection factor, Outstanding low reflection factor improves overall system performance and margin and reduces mismatch losses
- Totally Waterproof according to IP 68, Assures safe, long term operation in the harshest of environments. System tightness doesn't have to rely on overpressure from dehydration equipment.
- RoHS (EU) and CRoHS (China) compliant i.e. can be used on a global basis

**Technical Features****STRUCTURE**

|                          |                 |
|--------------------------|-----------------|
| Cable Type               | Air Dielectric  |
| Cable Size               | 7/8"            |
| Model Series             | HCA78-50 Series |
| Connector Interface Size | 1-5/8" EIA      |

**MECHANICAL SPECIFICATIONS**

|                                    |                                             |
|------------------------------------|---------------------------------------------|
| Sealing Volume                     | 5cm <sup>3</sup> (0.169ounces)              |
| Inner Conductor Material / Coating | Copper-alloy / Silver                       |
| Outer Conductor Material / Coating | Copper-alloy / Nickel                       |
| Sealing Volume                     | 5cm <sup>3</sup> (0.169ounces)              |
| Sealing Method                     | Silicone compound, PLAST 2000 - See Note 2. |

**ELECTRICAL SPECIFICATIONS**

|                           |             |             |
|---------------------------|-------------|-------------|
| Nominal Impedance         | 50 Ω        |             |
| Connector Frequency Range | 0 - 3.0 GHz |             |
| Frequency Range           | VSWR        | Return Loss |
| DC - 1000 MHz             | 1.02        | 40          |
| 1000- 2300 MHz            | 1.05        | 32.2        |
| 2300 - 3000 MHz           | 1.07        | 29.4        |

## TESTING AND ENVIRONMENTAL

### Ingress Protection (IP) Rating

IP 68



### Note

1. The connector is converted to gas pass by drilling through the pilot hole in the insulator.
2. Sealing compound must be ordered separately.
3. Connector does not include an inner connector.

## Related Documents



## Installation Instruction

## Installation Instructions