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## SI-20 Low Passive Intermodulation Termination

### Description

The SI-20A provides a means of terminating cables and test ports without generating significant levels of intermodulation products.

### Specifications



<i>Frequency Range</i>	800 MHz to 3 GHz
<i>Characteristic Impedance</i>	50 Ohms (nom.)
<i>Return Loss</i>	16 dB (min)
<i>Intermodulation Products</i>	-118 dBm (max., 2 x 43 dBm carriers) -125 dBm (typ., 2 x 43 dBm carriers)
<i>Power Handling</i>	75W Avg (min)
<i>Connector Type</i>	DIN 7-16 Jack
<i>Recommended Coupling Torque</i>	30 Newton-meters (22 foot-pounds)
<i>Maximum Coupling Torque</i>	50 Newton-meters (36 foot-pounds)
<i>Operating Ambient Temperature</i>	0 to 35°C (32 to 95°F)
<i>Physical Dimensions</i>	2.7 x 17.7 x 6.6 cm (5 x 7 x 2.6 Inches.)
<i>Weight</i>	2.7 kg (6 pounds)

### Supplied Accessories

The SI-20A Termination is supplied with the following accessories:

- DIN 7-16 Plug-to-Plug Adapter
- Storage Case



## **Using the SI-20A**

The SI-20A is designed to provide a minimum 16 dB return loss from 800 MHz to 3 GHz. The level of any single IM response generated in the reverse direction from the termination is less than -120 dBm when two, 20 Watt carriers are incident upon the termination.

Occasionally, the measured IM level from the termination may appear to exceed the -120 dBm level. This can occur due to one or more of the following causes:

- 1) **The connector or device mating to the termination also has an approximate -118 dBm IM level.** This results in the IM from the termination and the connector adding in-phase to produce a resultant IM level as much as 6 dB higher than any one device's individual IM level.
- 2) **The connector is not torqued properly.** This results in partially mated electrical contacts within the connector. The termination's connector is designed for a coupling torque of 30 Newton-meters (approx. 22 foot-pounds). If "O"-rings are installed in the mating connector, or if the mating connector is designed for a higher coupling torque, up to 50 Newton-meters (approx. 36 foot-pounds) may be used. Do not exceed this maximum torque as the termination's connector may be damaged.
- 3) **The connector is contaminated.** Ensure that the termination's connector and the mating connector are clean and free of contaminants. Use a lint-free swab and alcohol to clean the interfaces, followed by a blast of clean air.
- 4) **The connector is excessively worn.** After many mate and de-mate cycles, the connector on the termination may become worn. When the silver plating thins, this exposes metals which can produce an IM response.