

## Tandem Mounted Rotary Step Attenuators (subminiature and miniature)

These tandem attenuators are combinations of the step units described on pages 3 and 4, combined in a single assembly with a single dial and dB readout. They permit instrumentation designs calling for higher dB ranges with finer step divisions. For example, the Model 8140 combines the 8120 and 8122 attenuators to provide a full range of attenuation in 1 dB steps to 109 dB.



Model No. 8140 S

Mechanical configurations are shown in the outline drawings. The variable is overall length.

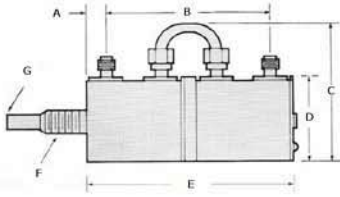
### SPECIFICATIONS (for definition and meaning of specs, see page 2)

Model	8107	8140	8142
Attenuation Range	69 dB	109 dB	69 dB
Steps	1 dB	1 dB	1 dB
Frequency Range	DC to 2.0 GHz	DC to 2.0 GHz	DC to 2.0 GHz
Accuracy-Incremental Attenuation	±0.2 dB or 3% whichever is greater	±0.2 dB or 3% whichever is greater	±0.2 dB or 3% whichever is greater
Accuracy-Incremental (Step to Step) <sup>t</sup>	See Table 1	See Table 1	See Table 1
Impedance	50 ohms	50 ohms	50 ohms
VSWR	DC to 1.0 GHz. 1.3:1 max. 1.0 to 2.0 GHz. 1.4:1 max.	DC to 1.0 GHz. 1.3:1 max. 1.0 to 2.0 GHz. 1.4:1 max.	DC to 1.0 GHz. 1.3:1 max. 1.0 to 2.0 GHz. 1.4:1 max.
Insertion Loss @Maximum Frequency	0.4 dB max.	0.4 dB max.	0.4 dB max.
Power Rating Average/Peak	3W @ 85°C 200W 5uS/sec. Max.	3W @ 85°C 200W 5uS/sec. Max.	3W @ 85°C 200W 5uS/sec. Max.

<sup>t</sup> Note: Incremental accuracy tolerances are not accumulative; at any position, attenuation will always be within the specified accuracy of 3%.

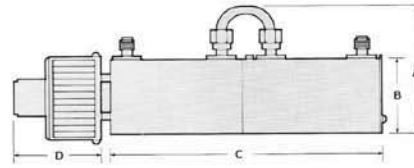
# Tandem Mounted Rotary Step Attenuators (subminiature and miniature)

**DRAWING A**



- A 0.28"
- B 2.35"
- C 2.3" MAX
- D 1.33" O.D.
- E 3.1" MAX
- G 0.28" DIA SHAFT
- F 0.375" DIA THREADED BUSHING

**DRAWING B**

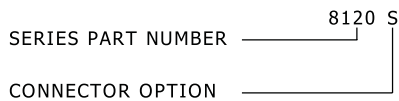


- A 2.6" MAX
- B 1.33" O.D.
- C 4.65"
- D 1.50"

<b>Model</b>	8107	8140	8142
<b>Connector Types Available</b> (See Codes Below)	S,A*	S,A*	S,A*
<b>Weight (approx)</b>	12 oz.	1 lb. 1 oz.	1 lb. 1 oz.
<b>Temperature Operating/Storage</b>	-55 to +85°C -55 to +125°C	-55 to +85°C -55 to +125°C	-55 to +85°C -55 to +125°C
<b>Mounting</b>	up to 3/16" panel thickness	up to 3/16" panel thickness	up to 3/16" panel thickness
<b>Angle Between Steps</b>	30°	30°	30°

**HOW TO ORDER**

Specify part number and connector option



**CONNECTOR CODE**

- "S" - SMA JACK 50 ohms
- "A" - BNC JACK 50 ohms

**TABLE 1**

Mode No.	Combination of:
8107	8051/8052
8140	8120/8122
8142	8121/8122

\*Frequency limited to 1 GHz with "A" type connectors.

Incremental (step-to-step) attenuation accuracy is the same as the incremental (step-to-step) accuracy of the units that go to make up the tandem units, and are not accumulative, except at the transition points x9 to x\*10. Example: From 30 to 40 dB, the incremental (step-to-step) accuracy

of the 9 dB step and the (step-to-step) incremental accuracy of the 10 dB step attenuator are additive. Please contact the factory for further clarification of this specification if necessary. (see pages 3 and 4 for accuracy specifications)