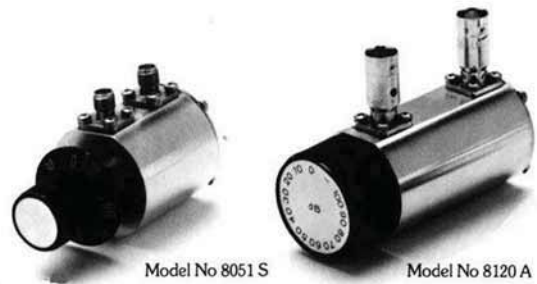


## SubMiniature and Miniature Rotary Step Attenuators

These Telonic step attenuators are available in five different models with attenuation ranges from 1 to 100 dB, in steps of 1 to 10 dB. There are two basic case designs, both 1.33" diameter with lengths of 1.50" (subminiature) and 2.29" (miniature). This mechanical configuration reduces panel mounting space and back panel space to minimums, and also permits incorporation of these attenuators into many existing designs.

All versions utilize Telonic solid state thick film resistive elements for high precision, repeatability, and extensive service life.

SMA and BNC connectors are available in standard items but special types may be ordered upon consultation with the factory.



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

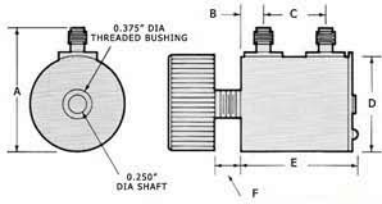
Model	8051	8052	8120	8121	8122
Attenuation Range	60 dB	10 dB	100 dB	60 dB	10 dB
Steps	10 dB	1 dB	10 dB	10 dB	1 dB
Frequency Range	DC to 2.0 GHz	DC to 2.0 GHz	DC to 2.0 GHz	DC to 2.0 GHz	DC to 2.0 GHz
Accuracy-Incremental Attenuation	3%	±0.2 dB or 3% whichever is greater	3%	3%	±0.2 dB or 3% whichever is greater
Accuracy-Incremental (Step to Step) <sup>t</sup>	See Table 1	1 dB ±.14 dB	See Table 1	See Table 1	1 dB ±.14 dB
Impedance	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms
VSWR	1.3:1 max.	1.3:1 max.	1.3:1 max.	1.3:1 max.	1.3:1 max.
Insertion Loss @Maximum Frequency	0.2 dB max.	0.2 dB max.	0.2 dB max.	0.2 dB max.	0.2 dB max.
Power Rating Average/Peak	3W @ 85°C 200W*	3W @ 85°C 200W*	3W @ 85°C 200W*	3W @ 85°C 200W*	3W @ 85°C 200W*
Dimensions Case Diameter	1.33"	1.33"	1.33"	1.33"	1.33"
Case Length	1.5" (See dim. drawing A)	1.5" (See dim. drawing A)	2.29" (see dim. drawing B)	2.29" (see dim. drawing B)	2.29" (see dim. drawing B)

\* 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%.

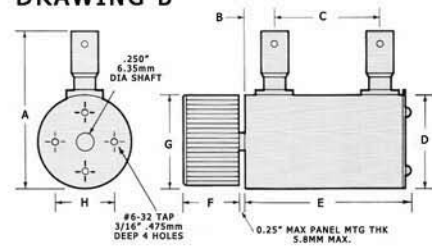
# SubMiniature and Miniature Rotary Step Attenuators

**DRAWING A**



- A 1.64" ± .02  
41.7mm ± .6
- B 0.28"  
7.1mm ± .02
- C 0.80"  
20.2mm ± 1
- D 1.33" ± .02  
33.8mm ± .51
- E 1.50"  
38.1mm ± .9
- F .25" MAX PANEL MTG THK

**DRAWING B**

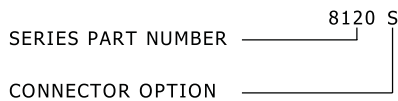


- A 2.12"  
53.9mm ±1.0
- B .41" ±.02  
10.4mm ±.6
- C 1.46" ±.03  
37.1mm ±.08
- D 1.33" O.D. ±.02  
39.8mm ±.51
- E 2.29" MAX  
58.1mm MAX
- F 0.68"  
17.3mm MAX
- G 1.25" DIA  
31.8mm ±.5
- H 0.750"  
19.05mm ±.03

Model	8051	8052	8120	8121	8122
Connector Types Available (See Codes Below)	S,A*	S,A*	S,A*	S,A*	S,A*
Weight	4.0 oz.	4.0 oz.	6.5 oz.	6.5 oz.	6.5 oz.
Temperature Operating/Storage	-55 to +85°C -55 to +125°C	-55 to +85°C -55 to +125°C	-55 to +85°C -55 to +125°C	-55 to +85°C -55 to +125°C	-55 to +85°C -55 to +125°C
Mounting	up to 1/4" panel thickness	up to 1/4" panel thickness	up to 1/4" panel thickness	up to 1/4" panel thickness	up to 1/4" panel thickness
Angle Between Steps	30°	30°	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**

Accuracy-Incremental (Step to Step)

Step	Accuracy
10 dB	10 dB±0.3 dB
20 dB	10 dB±0.5 dB
30 dB	10 dB±0.7 dB
40 dB	10 dB±0.8 dB
50 dB	10 dB±1.0 dB
60 dB	10 dB±1.2 dB
70 dB	10 dB±1.3 dB
80 dB	10 dB±1.4 dB
90 dB	10 dB±1.5 dB
100 dB	10 dB±1.6 dB

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