



# DOUBLE-RIDGE WAVEGUIDE POWER SAMPLERS

**R50 SERIES                      R50-S SERIES**

**DATA  
SHEET  
No. T15E**

- **LOW VSWR**
- **FULL BAND**
- **FLAT COUPLING**

### DESCRIPTION

MEC R50 Series samplers provide a convenient method of monitoring an RF signal with almost no impact on its VSWR or insertion loss. However, unlike more complex directional couplers, these samplers have no inherent directivity and equally sample signals propagating in either direction. They are therefore more appropriate in well-matched transmission lines.

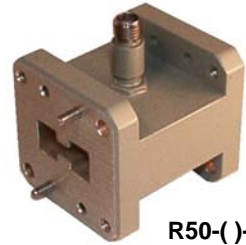
Samplers are ideal for monitoring frequency, power level, in feedback loops and as diagnostics ports Samplers may also be integrated into to other components such as high power terminations, waveguide assemblies and coaxial adapters thus eliminating a flange junction.

The standard length R50 Series samplers have cover flanges with alternate tapped and clearance holes (C-1), while the shorter R50-S series have cover flanges, all tapped (C-2). A selection of coaxial connectors is available covering a full range of power levels, frequency bands and environments.

Materials is aluminum, finish is chromate conversion per MIL-C-5541, Class 3 and paint is gray epoxy enamel.

### SPECIFICATIONS

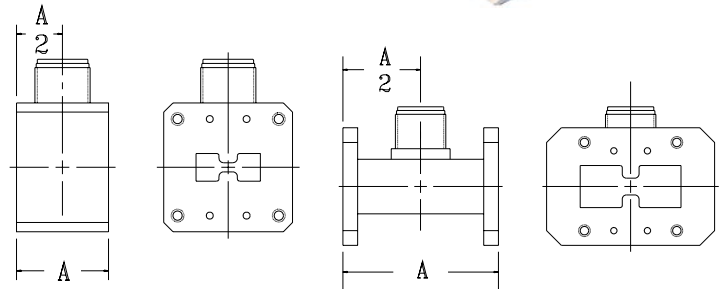
<b>Coupling:</b> 30, 40, 50, 60, dB	<b>Frequency Sensitivity:</b> $\pm 1.0$ dB max. (octave band)
<b>Coupling Mean:</b> $\pm 1.0$ dB	<b>VSWR:</b> Main Line 1.06 max.



R50(-)-3



R51(-)-N



R50-S SERIES

R50 SERIES

MODEL NUMBER	FREQUENCY RANGE (GHz)	WAVEGUIDE SIZE	FLANGE	A (INCHES $\pm .03$ )
R55 R55-S	18.0 – 40.0	WRD-180C24	MEC-180C1 MEC-180C2	1.00 .055
R56 R56-S	11.0 – 26.5	WRD-110C24	MEC-110C1 MEC-110C2	1.00 0.55
R50 R50-S	7.5 – 18.5	WRD-750D24	MEC-750C1 MEC-750C2	2.00* 1.00
R57 R57-S	6.5 – 18.0	WRD-650D28	MEC-650C1 MEC-650C2	2.00* 1.00
R58 R58-S	5.8 – 16.0	WRD-580D28	MEC-580C1 MEC-580C2	2.00* 1.00
R51 R51-S	4.75 – 11.0	WRD-475D24	MEC-475C1 MEC-475C2	2.00 1.25
R59 R59-S	4.8 – 11.0	DR19	MEC-DR19C1 MEC-DE19C2	2.00 1.25
R52 R52S	3.5 – 8.2	WRD-350D24	MEC-350C1 MEC-350C2	2.00 1.00
R53 R53-S	2.0 – 4.8	WRD-200D24	MEC-200C1 MEC-200C2	2.00 1.00

\*1.50 for SMA

### ORDERING INFORMATION

(1) Add suffixes to model number as follows:

- |                |                      |                   |                      |              |
|----------------|----------------------|-------------------|----------------------|--------------|
| (a) COUPLING:  | -30 for 30dB         | -40 for 40dB      | -50 for 50dB         | -60 for 60dB |
| (b) CONNECTOR: | -17 for SSMA female  | -3 for SMA female | -N for type N female |              |
|                | -7 for precision 7mm | -SC for SC female |                      |              |

(c) FREQUENCY: Specify actual frequency band desired.

EXAMPLE: R57-40-3-6.5-18.0 is a WRD-650D28 waveguide for 40dB sampler

With SMA female connector operating full band from 6.5 to 18.0 GHz.

(2) Other connectors, couplings and bands available on request.

