



DOUBLE-RIDGE WAVEGUIDE DELAY LINES R220 SERIES

DATA
SHEET
No.T27D

- LOW VSWR
- BROAD BANDWIDTH
- LOW INSERTION LOSS

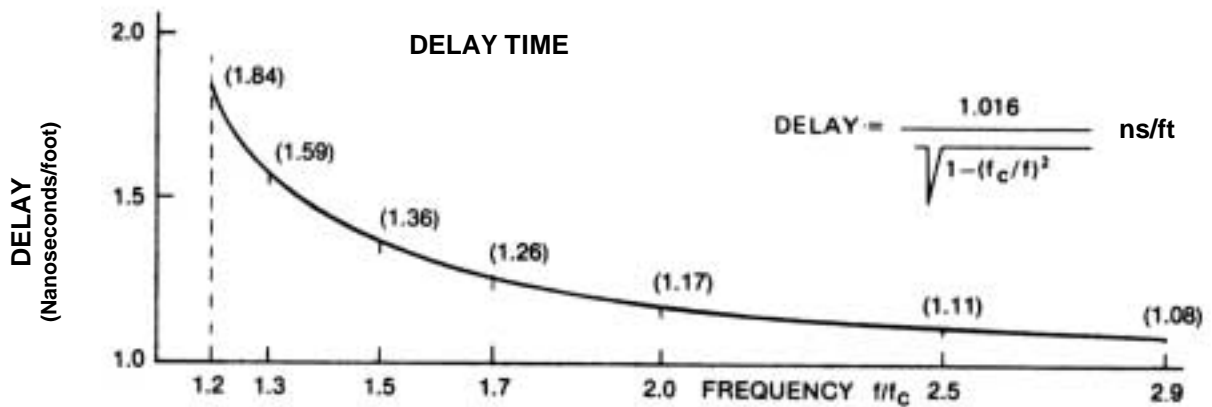
DESCRIPTION

MEC's R220 Series DELAY LINES in DOUBLE-RIDGE Waveguide offer full frequency bandwidth coverage with state-of-art low VSWR and insertion loss. These fixed-length lines have been built with delays ranging from tens to hundreds of nanoseconds. They are compact, lightweight, rigidly constructed, and designed to comply with the environmental requirements specified in MIL-E-5400. Flanges are MEC Series C-1 (6061 aluminum alloy cover type with alternate tapped and clearance holes). All lines are bilaterally swept-frequency tested to insure low VSWR and insertion loss over the entire frequency bandwidth of the waveguide. These measurement techniques insure that the fine grain structure is measured completely and is well within acceptable limits of operation.



TYPICAL SPECIFICATIONS

Model:	R220-150	Time Delay:	276 to 162 nanoseconds
Waveguide:	WRD-750D24	VSWR:	1.2 typical
Frequency:	7.5-18.0 GHz	Size:	6.0" x 16.0" x 20.0"
Length:	150 feet	Ins. Loss:	Approx. 18dB: 8-16 GHz, 21 dB max.:7.5 & 18 GHz
Finish:	Chromate conversion per MIL-C-5541 & gray epoxy enamel		



INSERTION LOSS

To estimate insertion loss for a given length, use the tabulated approximate loss values. They are based on aluminum waveguide. Attenuation is minimum at $1.7f_c$, where f_c = cutoff frequency of TE_{10} mode.

MODEL SERIES	FREQUENCY RANGE (GHz)	WAVEGUIDE SIZE	f_c (GHz)	ATTENUATION (dB/ft.)		
				$1.2 f_c$	$1.7 f_c$	$2.9 f_c$
R220	7.5 – 18.0	WRD-750D24	6.356	.14	.11	.14
R221	4.75 – 11.0	WRD-475D24	4.025	.075	.055	.070
R222	3.5 – 8.2	WRD-350D24	2.966	.045	.035	.040
R229	4.8 – 19	DR-19	4.23	.08	.06	.07

ORDERING INFORMATION

For packaging and shape, contact MEC. Specify waveguide size and length. EXAMPLE: R220-110 is the model number for WRD-750D24 waveguide covering 7.5-18 GHz, 110 feet long.

Data subject to change without notice



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