

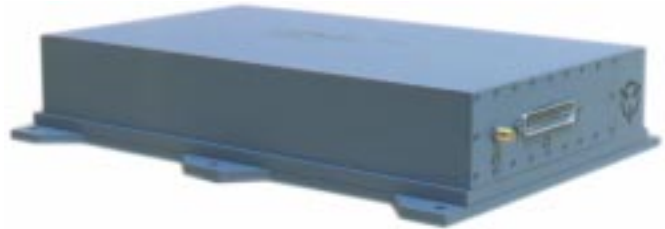
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Catalog DFDs

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DFD Receivers Standard



The 1831XX model series of DFD receivers cover the 0.5 to 18 GHz bands in three models. These full up receivers measure frequency, amplitude, pulsewidth and TOA (time of arrival) on each single pulse, and also provides flags for PMOP, FMOP, and Data Invalid detection. Each unit uses 1:2 DFD architecture providing optimum performance in degraded signal environments.

The 18C31XX series use the same 1:2 DFD structure as the 1831XX series, except with lower complexity providing only frequency measurement.

Specifications

Model #	18 3110	18 3120	18 3130	18C3110	18C3120	18C3130
Operating Frequency (GHz)	0.5 - 2.0	2.0 - 6.0	6.0 - 18.0	0.5 - 2.0	2.0 - 6.0	6.0 - 18.0
Min Pulse Width (nsec)	100	100	100	100	100	100
<u>Dynamic Range (dBm)</u>						
Min	- 65	- 65	- 65	- 55	- 55	- 55
Max	+ 5	+ 5	+ 5	+ 5	+ 5	+ 5
Signal to Noise Ratio (dB Min)	6.0	0.0	0.0	6.0	2.0	2.0
<u>Frequency Measurement</u>						
Unambiguous (MHz)	2560	5120	12288	2560	5120	12288
Architecture	1:2:4	1:2	1:2:4	1:2:4	1:2	1:2:4
Data Valid Bit	Yes	Yes	Yes	Yes	Yes	Yes
Number of Bits	12	12	13	12	12	13
Resolution (MHz)	0.625	1.25	1.5	0.625	1.25	1.5
Accuracy (MHz)RMS	1.0	2.0	3.0	1.0	2.0	3.0
Internal Threshold	Yes	Yes	Yes	Yes	Yes	Yes
External Read	No	No	No	Yes	Yes	Yes
PMOP Processing	Yes	Yes	Yes	No	No	No
FMOP Processing	Yes	Yes	Yes	No	No	No
<u>Pulsewidth Measurement</u>						
Number of Bits	12	12	12	No Pulsewidth Measurement		
Resolution (nsec)	50	50	50	No Pulsewidth Measurement		
Accuracy (nsec)	50	50	5	No Pulsewidth Measurement		
<u>Amplitude Measurement</u>						
Number of Bits	8	8	8	No Amplitude Measurement		
Resolution (dB)	0.3125	0.3125	0.3125	No Amplitude Measurement		
Linearity (dB)	3.0	3.0	3.0	No Amplitude Measurement		
<u>TOA Measurement</u>						
Number of Bits	32	32	32	No TOA Measurement		
Resolution (nsec)	50	50	50	No TOA Measurement		
Temperature (deg. C)	-20 +70	-20 +70	-20 +70	-20 +70	-20 +70	-20 +70
Dimensions (inches)	15 x 8 x 2	15 x 7 x 2	15 x 7 x 2	12 x 8 x 2	7 x 12 x 2	7 x 12 x 2
Weight (lb)	11.5	11.5	11.5	10	8	8
Power (Watts)	80	80	80	34	34	34