

Data Sheet

VIAVI

JD730B Series

CellAdvisor™ RF Directional and Terminating Power Sensors

Portable JD730B power sensors for field applications interface with a PC or VIAVI wireless field test solutions such as JD720-, JD740-, and JD780-series instruments for various power measurements.

JD731B and JD733A directional power sensors measure forward and reflected power without disrupting service. They can be used for installation, maintenance, and monitoring of transmitters with antennas in wireless base station.

JD732B, JD734B, and JD736B terminating power sensors measure transmitted power. They can be used to install and maintain wireless base stations and RF generators or repeaters.

While conventional power sensors can be used in conjunction with additional power meters, JD730B power sensors are small and lightweight, making them optimal for portable field applications. They can also be powered by a PC.



Power meter measurements shown on a PC

Key Benefits

- Quickly verify that cell site output power meets required standards
- Portable design optimizes field use with USB connectivity to CellAdvisor or PC
- Prevent system damage from antenna system backdraft by measuring reverse power

Key Features

- Measures power and displays results on CellAdvisor or a PC
- Compact and lightweight
- Guaranteed accuracy across complete frequency range with no need to disconnect or power off for zeroing
- Two types of power sensors: terminating for out-of-service applications and directional for in-service applications



JD731B/JD733A Directional Power Sensors

Directional power sensors can be connected between the transmitter and the load and adhere to power metrics without disturbing service, making them ideal for wireless base station in-field monitoring and maintenance.



JD731B/JD733A directional power sensor

JD732B/JD734B/JD736B Terminating Power Sensors

Terminating power sensors measure true RMS and/or peak power in a terminating mode where the power sensor absorbs all power. This capability is typical for out-of-service applications such as those in engineering, laboratory, and manufacturing as well as installation and maintenance.



JD732B/JD734B/JD736B terminating power sensor

Function	Directional Type		Terminating Type		
	JD731B	JD733A	JD732B	JD734B	JD736B
Frequency range	300 MHz to 3.8 GHz	150 MHz to 3.5 GHz	20 MHz to 3.8 GHz	20 MHz to 3.8 GHz	20 MHz to 3.8 GHz
Measurement					
Average power	✓	✓	✓		✓
Peak power	✓	✓		✓	✓
Pulse power	✓				✓
CCDF	✓				
VSWR	✓	✓			

Compatible with PC and CellAdvisor



Specifications

Terminating Power Sensors	JD732B	JD734B	JD736B
Sensor type	Average	Peak	Average, peak, and pulse
Frequency range	20 MHz to 3.8 GHz		
Power range	-30 to +20 dBm (1 μ W to 100 mW)		
Measurement uncertainty	$\pm 7\%$ of reading ^{1,2}		
Burst width accuracy	N.A	N.A	$\pm(2+ 0.2/D^*)\%$
Pulse power burst width	N.A	N.A	2.5 μ s to 75 ms
Duty cycle	N.A	N.A	0.001 to 1
Weight	0.3 kg		
Size (W×H×D)	64 × 96 × 38 mm (2.52 × 3.78 × 1.50 in)		
RF connector	Type-N (m)		
Directional Power Sensors		JD731B	JD733A
Sensor type	Average, peak, pulse, CCDF, VSWR		Average, peak, VSWR
Frequency range	300 MHz to 3.8 GHz		150 MHz to 3.5 GHz
Return loss	≤ 2.5 GHz: 27 dB min/ > 2.5 GHz: 25 dB		
Directivity	27 dB min		27 dB min
Insertion loss	Below 1 GHz: < 0.05 dB, 1GHz - 3 GHz: < 0.1 dB, Up to 3.8 GHz, < 0.13 dB		
AVG power	Power range	0.15 to 150 W (21.76 to 51.76 dBm)	0.1 to 50 W (20 to 47 dBm)
	Measurement uncertainty	$\pm 4\%$ of reading ^{1,2}	$\pm (4\%$ of reading + 0.05 W) ^{1,2}
Peak power	Power range	4 to 400 W (36.02 to 56.02 dBm)	0.1 to 50 W (20 to 47 dBm)
	Measurement uncertainty	$\pm (7\%$ of reading + 0.05 W) ^{1,2} at pulse width > 10 μ s $\pm (15\%$ of reading + 0,05 W) ^{1,2} at 1 μ s < pulse width < 10 μ s	$\pm (4\%$ of reading + 0.05 W) ^{1,2}
Pulse power	Power range	4 to 400 W (36.02 to 56.02 dBm)	N/A
	Measurement uncertainty	$\pm(4\%$ of reading + 0.05 W) ^{1,2}	N/A
	Burst width accuracy	$\pm(2+ 0.2/D^*)\%$	N/A
	Pulse power burst width	2.5 μ s to 75 ms	N/A
Interface	1 serial interface, 1 USB interface		
Operation temperature	0 to 50°C (32 to 122°F)		0 to 50°C (32 to 122°F)
Storage temperature	-20 to 70°C (-4 to 158°F)		-20 to 70°C (-4 to 158°F)
Weight	0.5 kg (11.37 lb)		
Size (W×H×D)	98 × 118.7 × 33.2 mm (3.86 × 4.67 × 1.31 in)		
RF connector	Type-N (f)		

1. Specification is provided at a temperature of 25°C \pm 10°C.

2. CW condition.



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