

BK Precision Portable Spectrum Analyzer

*Part No. 01BKSA2650*Back to [Spectrum Analyzer](#) Main Page

Specifications	Model 2650
FREQUENCY SECTION	
Frequency range	50kHz to 3.3GHz
Center frequency	
Setting resolution	100kHz Allows rotary encoder, numeric key and function key
Accuracy	within $\pm(30+100T)$ kHz ± 1 dot (frequency span : 200kHz to 10MHz, RBW : 30kHz, 23 $\pm 5^{\circ}$ C) T : Sweep time (s) within $\pm(100+700T)$ kHz ± 1 dot (frequency span : 20MHz to 3.3GHz, RBW : 100kHz, 23 $\pm 5^{\circ}$ C) T : Sweep time (s)
RBW frequency error	within $\pm 6\%$ of RBW (RBW : 3kHz, 30kHz) within $\pm 30\%$ of RBW (RBW : 100kHz to 3MHz)
Frequency span	
Setting range	0Hz (zero span), 200kHz to 2GHz (1-2-5step) and 3.3GHz (full span)
Accuracy	within $\pm 3\% \pm 20$ TkHz ± 1 dot (Frequency span : 200kHz to 10MHz, 23 $\pm 5^{\circ}$ C) within $\pm 3\% \pm 200$ TkHz ± 1 dot (Frequency span : 20MHz to 3.3GHz, 23 $\pm 5^{\circ}$ C) T : Sweep time (s)
Display resolution	Frequency span/250 Frequency span/1000 (only the measurement by RS-232C communication)
Display dot number	251dots, 1001dots (only the measurement by RS-232C communication) (The unit displays data in 251 horizontal dots, but it internally captures the trace in 1001 dots)
Resolution bandwidth	3dB bandwidth
Setting range	3kHz to 3MHz (1-3step) and AUTO
Accuracy	within $\pm 20\%$
Selectivity	1 : 12 (typical, 3dB : 60dB)
Video bandwidth	100Hz to 300Hz (1-3step), OFF and AUTO
SSB Phase noise	-90dBc / Hz (typical, 100kHz offset, RBW : 3kHz, VBW : 100Hz, Sweep time : 0.3s)
Spurious response	less than -60dBc
Harmonics	less than -40dBc (50kHz to 100MHz) less than -45dBc (100MHz to 3.3GHz)
AMPLITUDE SECTION	
Reference level	
Setting range	+10 to -40dBm (1dB step)
Accuracy	within ± 0.8 dB ± 1 dot (center frequency : 100MHz, RBW : 3MHz, VBW : OFF, ATT : 0dB, 23 $\pm 5^{\circ}$ C)
Unit	dBm, dBV, dBmV, dB μ V, dB μ V/m, dB μ A/m (dB μ V/m and dB μ A/m is used the measuring function)
Average noise level	-110dBm (typical, center frequency : 100MHz RBW : 3kHz, VBW : 100Hz)
Frequency Characteristic	within ± 2.0 dB ± 1 dot (100kHz to 100MHz) within ± 1.0 dB ± 1 dot (100MHz to 3.3GHz)
Input impedance	50ohm
Input VSWR	less than 2.0
Input attenuator	

Operating range	0 to 25dB (1dB step), coupled with reference level
Switching error	within ± 0.6 dB
RBW switching error	within ± 0.6 dB
Display resolution	0.4dB (10dB/div), 0.08(2dB/div)
Display dot number	200dot
Display scale	
Scale	10dB / div, 2dB / div
Accuracy	within ± 0.2 dB / 2dB ± 1 dot within ± 0.8 dB / 10dB ± 1 dot within ± 1.6 dB / 70dB ± 1 dot
Input damage level	+20dBm (CW average power), 25VDC
Input connector	SMA (J)
SWEEP SECTION	
Sweep time	
Setting range	10ms to 30s (1-3step, frequency span : 0 to 2GHz) and AUTO 30ms to 30s (1-3step, frequency span : full span) and AUTO
Accuracy	within $\pm 0.1\%$ ± 1 dot (frequency span : 0 to 2GHz) within $\pm 1.5\%$ ± 1 dot (frequency span : full span)
Trigger mode	AUTO (frequency span : zero span)
Detection mode	Positive peak, Negative peak, Sample (when sweep time is 10ms or 30ms, only Sample can be set)
FUNCTIONS	
Marker	NORM : displays frequency (7 digits max) and level (4 digits max) at marker point. DELTA : displays difference frequency and level between 2 markers.
Peak search	NORM : searches a peak point within 10div. Available NEXT peak (10max). ZONE : searches a peak point within a zone designated by center and width. Marker moves to a peak point each sweep.
Calculation	NORM, MAX HOLD, MIN HOLD, AVERAGE, OVER WRITE * MAX/MIN HOLD : 2 to 1024 times, AVERAGE : 2 to 256
Measuring	Channel power, Adjacent channel power, Occupied frequency bandwidth, Electric field strength (needs optional antenna), Magnetic field strength (needs optional magnetic field probe) measurement.
AUTO tuning	When pressing AUTO TUNE key, the maximum level spectrum within 3.3GHz bandwidth is adjusted to center, and reference level, RBW, VBW and sweep time are adjusted to optimum values.
Save / Load	
Save	Saves 100 traces and 100 setups
Load	Loads 1 trace and 1 setup
GENERAL	
Communication	
Interface	RS-232C
Baud rate	2,400 to 38,400bps
Hard copy	Allows direct hard copy with an optional printer
Display	
Display	LCD
Backlight	CFL backlight
Resolution	320 (H) \times 240 (V) dots
Power source	
Battery	Ni-MH Battery
External DC source	Pin jack, DC5V / 4A
OTHER	
Operating temperature	0 to 40°C (Guaranteed at 23 \pm 10°C, without soft carrying case)
Operating humidity	less than 40°C / 80%RH (Guaranteed at less than 33°C / 70%RH, without soft carrying case)
Storage temperature	-20 to 60°C, less than 60°C / 70%RH
Dimensions	162 (W) \times 70 (H) \times 260 (D) mm (exclude projections and stand)
Weight	approx. 1.7kg (included battery), approx. 1.5kg(without battery)

