Technology Support on the Leading Edge
ADVANTEST
ADVANTEST CORPORATION

Spectrum Analyzer U3641
CDMA Option (OPT60)

For CDMA (IS-95/J-STD-008) Tx Measurement

Spectrum Analyzer U3641

■Overview

Addition of the CDMA option (OPT60) to the U3641 Spectrum Analyzer enables easy one button measurement of CDMA transmission characteristics specified by IS-95/J-STD-008. Option 60 allows CDMA spectrum measurements for both base stations and mobile stations, at cellular or PCS frequencies.

The standard internal pre-amp of the U3641 is indispensable for high sensitivity field measurement. This sensitivity, combined with the U3641's compact, lightweight, battery-driven design makes the unit ideal for field use.

■Applicable Communication Systems

CDMA Cellular (IS-95) — BS/MS
CDMA-PCS (J-STD-008) — BS/MS

■Features

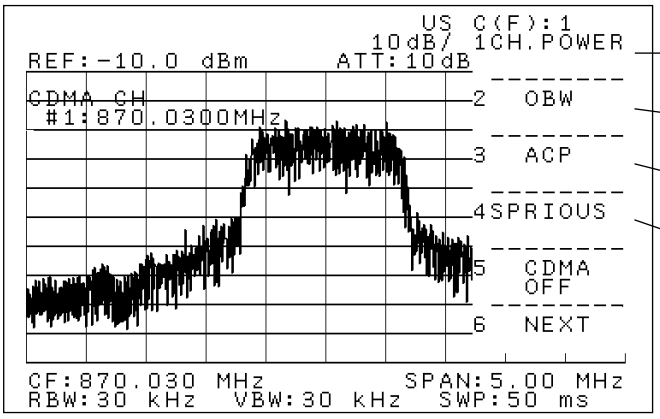
- Measurement frequency range : 9 kHz to 3 GHz
- Compact, lightweight (7 kg), AC, DC, or battery powered main unit optimized for field use
- Automatic internal setting of CDMA parameters
- High stability CDMA channel power measurement function
- High sensitivity power measurement possible with the built-in pre-amp
- Multiple CDMA system channels supported

■Measurement Items

- Channel Power measurement
- Occupied Bandwidth measurement
- Adjacent Channel Power (Spectrum Mask) measurement
- Spurious Emission (In-Band) measurement

For CDMA (IS-95/J-STD-008) Tx Characteristic Measurement

■Easy Measurement by Item Selection



Channel Power measurement

Occupied Bandwidth measurement

Adjacent Channel Power measurement

In-Band Spurious measurement

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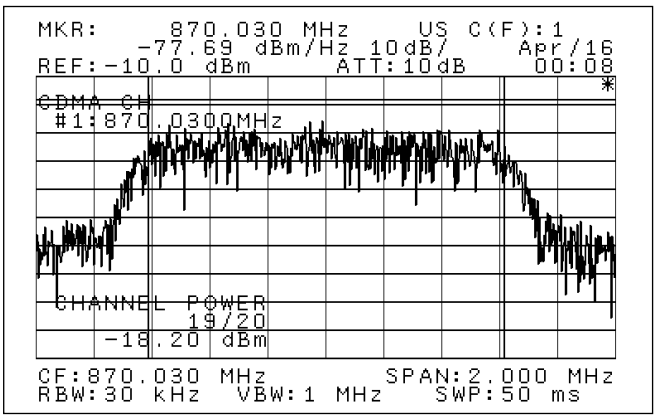
■High Stability CDMA Channel Power Measurement



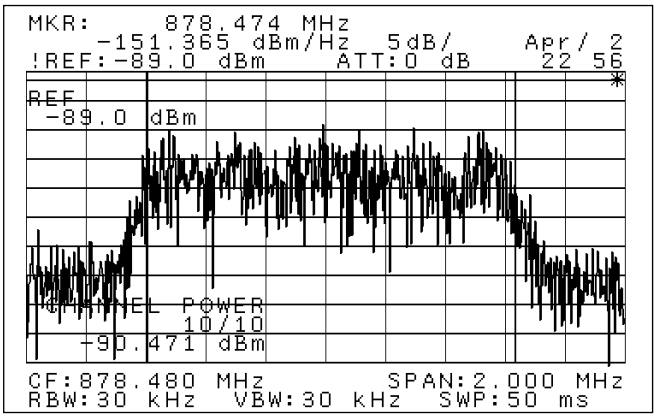
<Channel Power Measurement>

- **Stability** : ≤±2.0dB/24H
  (same settings, at 15 to 30°C)
- **Absolute accuracy** : ≤±2.0dB (15 to 30°C)
  ≤±2.5dB (0 to 50°C)
- **Relative accuracy** : ≤±0.5dB (15 to 30°C)
  ≤±0.8dB (0 to 50°C)

(after CAL execution, automatic setting, Pre-amp off,
-50dBm/1.23MHz to +20dBm/1.23MHz,
within 80dB display range.)

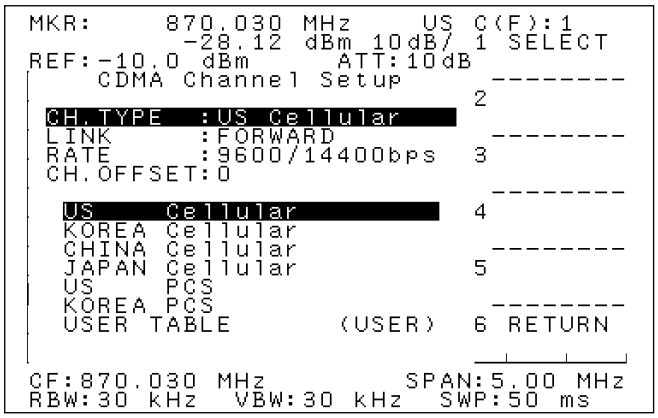
- Factor table for power value correction

■High Sensitivity Power Measurement with Built-in Pre-Amp



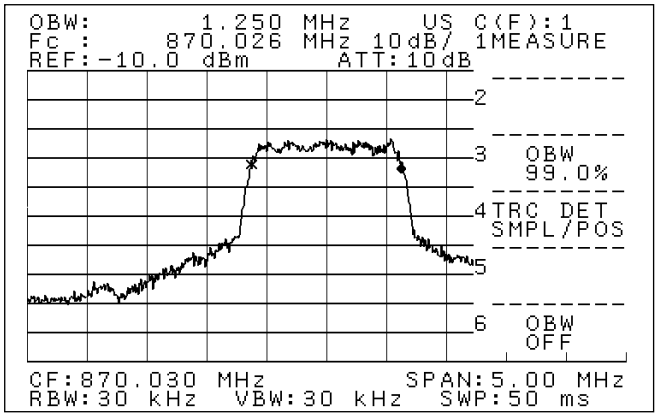
- CDMA channel power measurement of -90dBm/1.23 MHz or less (Typ.)
  ※Measurement range : +20 to -90dBm/1.23MHz (Typ.)
  (Pre-amp On : -25 to -90dBm/1.23MHz (Typ.))

Channel Tables for CDMA Systems



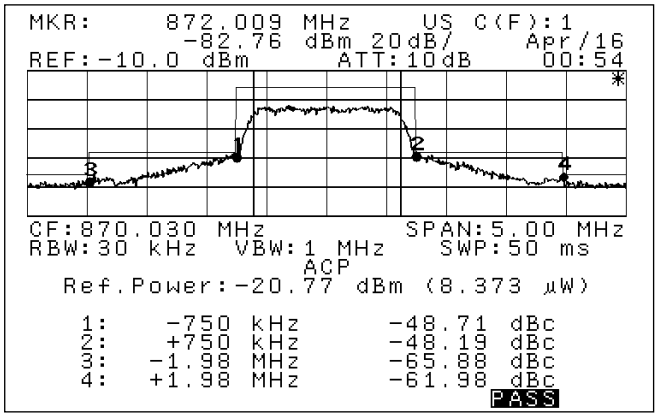
- Center frequency set by channel number (US-Cellular, KOREA-Cellular, CHINA-Cellular, JAPAN-Cellular, US-PCS, and KOREA-PCS channels supported)
- FORWARD/REVERSE channels supported
- Channel number offset allowed
- User table for up to 99 channels

OBW Measurement



- Single-operation measurement of frequency bandwidth (OBW) occupying 99% of the power
- Occupancy variable from 10% to 99.8%
- 2 to 999 times averaging
- REVERSE mode measurement corresponding to each rate (9600/14400, 4800/7200, 2400/3600, 1200/1800)

ACP (Spectrum Mask) Measurement

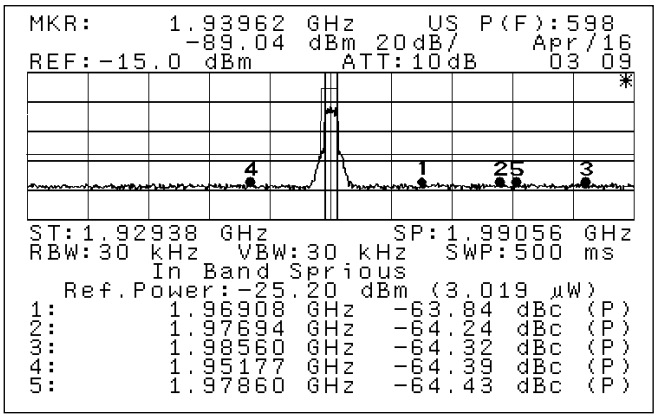


- ACP (dBc) measurement at each offset frequency according to standard, referenced to Tx power.

Offset Frequency	FOWARD	REVERSE
IS-95	±750KHz,±1.98MHz	±900KHz,±1.98MHz
J-STD-008	±885KHz,±2.5MHz	±1.25MHz,±2.5MHz

- Spectrum Mask pass/fail judgment to IS-95 and J-STD-008 standard templates
- Posi/Sample detection selection

Spurious Emission (In-Band) Measurement



- Relative (dBc) measurement simultaneous with Tx power measurement
- Pass/Fail judgment with peak list display to IS-95 and J-STD-008 standard templates
- Posi/Sample detection switching
- Automatic setting of in-Band frequency for each CDMA system

Spurious Emission Measurement Frequency Range	FOWARD		REVERSE	
	Start Frequency	Stop Frequency	Center Frequency	Frequency Span
US-Cellular	868.39MHz	894.59MHz	Carrier frequency	25MHz
KOREA-Cellular	868.39MHz	894.59MHz	Carrier frequency	25MHz
CHINA-Cellular	916.40MHz	948.10MHz	Carrier frequency	31MHz
JAPAN-Cellular	831.40MHz	870.60MHz	Carrier frequency	60MHz
US-PCS	1929.38MHz	1990.56MHz	Carrier frequency	60MHz
KOREA-PCS	1804.38MHz	1870.61MHz	Carrier frequency	65MHz
USER TABLE	Start frequency in the user table	Stop frequency in the user table	Carrier frequency	60MHz

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