

Tune up procedure

To set up transmit power before shipping, NEW POS uses a manufacturing process which is called “Calibration of Rx and Tx power over the dynamic range, temperature and frequency”.

CDMA technical standard requires NEW POS’s CDMA module to transmit more than +23dBm output power when it is required to transmit its maximum power. Therefore, NEW POS sets the maximum power of the module to +24.5dBm (+1dB, -1.5dB)

By adjusting Tx AGC Amplifier built in the CDMA module, transmit power can be limited to +24.5dBm (+1dB, -1.5dB)

Transmit power calibration consists of transmit linearizer calibration, and power compensation calibration over the temperature and frequency.

During the transmit linearizer calibration, the module searches for 16 AGC adjust values for the 16 power levels within the dynamic range including the maximum output power and saves these AGC adjust values in the memory device in the module. These searched AGC adjust values (TX_LIN_MASTER) set the maximum power of the module.

To prevent the variation in maximum power over the frequency, the transmit circuit is calibrated over the frequency and compensation values (TX_LIM_VS_FREQ) are found. These values are also used to limit the maximum output power to +24.5dBm (+1dB, -1.5dB)

Also to prevent the variation in maximum power over the temperature, the transmit circuit is calibrated over the temperature and compensation values (TX_LIM_VS_TEMP) are found. These are also used to limit the maximum output power to +24.5dBm (+1dB, -1.5dB) when there is variation in temperature..