Guide to CDMA2000 Terminal Certification in Indonesia

Certification in Indonesia

Certificate of approval is required for every telecommunication and ITE equipment entering Indonesian territory. The certificate of approval is issued by Directorate General of Resources and Equipment Standardization for Post and Informatics (SDPPI). Certifications are granted at the system (host) level. The certificate is valid for each type or model number of equipment while product or model series certificate or type approval is not acceptable.

In-Country Testing

In-Country testing is required prior to certificate issuance by SDPPI. RF / Telecom Test is mandatory while EMC and safety is voluntary. The test will require 2 (two) samples of equipment and it will be conducted by local laboratories which appointed by SDPPI.

Applicable Standards in Indonesia

Approval test will be based on national standards: KEPDIRJEN No. 297/DIRJEN/2004. The key parameters are as follows:

- **GENERAL REQUIREMENT**

Channel Spacing	1.25 MHz
Duplex Separation	45 MHz for CDMA800 (Band Class 0) 80 MHz for CDMA1900 (Band Class 1) 10 MHz for CDMA450 (Band Class 5)
Type of Modulation	CDMA with chip rate 1.2288 Mcps
RUIM	Refer to 3GPP2 Standard doc. C.S.0023
Language	Support Indonesian language (*not mandatory*)
Voice	Support voice service with Vocoder 13 Kbps QCELP and 8 Kbps EVRC
SMS	Support transmit and receive with minimum 160 character 7 bit ASCII
Data	Circuit Switched mode: 14.4 Kbps Packet Switched mode: 153.6 Kbps

- **TRANSMITTER**

Effective Radiated Power at Maximum Output Power

Band Class	Mobile Station Class	Radiating Measurement	Lower Limit	Upper Limit
0	Class I	ERP	1 dBW (1.25 W)	8 dBW (6.3 W)
	Class II	ERP	-3 dBW (0.5 W)	4 dBW (2.5 W)
	Class III	ERP	-7 dBW (0.2 W)	0 dBW (1.0 W)
1	Class I	EIRP	-2 dBW (0.63 W)	3 dBW (2.0 W)
	Class II	EIRP	-7 dBW (0.2 W)	0 dBW (1.0 W)
	Class III	EIRP	-12 dBW (63 mW)	-3 dBW (0.5 W)
	Class IV	EIRP	-17 dBW (20 mW)	-6 dBW (0.25 W)
	Class V	EIRP	-22 dBW (6.3 mW)	-9 dBW (0.13 W)
5	Class I	ERP	3 dBW (2.0 W)	10 dBW (10 W)
	Class II	ERP	-2 dBW (0.63 W)	5 dBW (3.2 W)
	Class III	ERP	-7 dBW (0.2 W)	0 dBW (1.0 mW)
	Class IV	ERP	-12 dBW (63 mW)	-5 dBW (0.2 W)

Band Class 0 System Frequency Correspondence

System Designator	Band Subclass	Transmit Frequency Band (MHz) Mobile Station
A	0	824.025 – 835.005
	1	824.025 – 835.005
		844.995 – 848.985
B	0	835.005 – 844.995
	1	835.005 – 844.995

CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 0

Transmitter	CDMA Channel Number	CDMA Frequency Assignment (MHz)
Mobile Station	1 ≤ N ≤ 799	0.030 N + 825.000
	991 ≤ N ≤ 1023	0.030 (N-1023) + 825.000
Base Station	1 ≤ N ≤ 799	0.030 N + 870.000
	991 ≤ N ≤ 1023	0.030 (N-1023) + 870.000

Band Class 1 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz) Mobile Station
B	1870 – 1885
E	1885 – 1890
F	1890 – 1895
C	1895 – 1910

CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 1

Transmitter	CDMA Channel Number	CDMA Frequency Assignment (MHz)
Mobile Station	0 ≤ N ≤ 1199	1850.000 + 0.050 N
Base Station	0 ≤ N ≤ 1199	1930.000 + 0.050 N

Band Class 5 Block Frequency Correspondence and Band Subclasses

Block Designator	Band Subclass	Transmit Frequency Band (MHz) Mobile Station
A	0	452.500 – 457.475
B	1	452.000 – 456.475
C	2	450.000 – 454.800
D	3	411.675 – 415.850
E	4	415.500 – 419.975
F	5	479.000 – 483.480
G	6	455.230 – 459.990
H	7	451.310 – 455.730

CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 5

Transmitter	CDMA Channel Number	CDMA Frequency Assignment (MHz)
Mobile Station	0 ≤ N ≤ 1199	0.025(N-1) + 450.000
	539 ≤ N ≤ 871	0.025(N-512) + 411.000
	1039 ≤ N ≤ 1473	0.025(N-1024) + 451.000
	1792 ≤ N ≤ 2016	0.025(N-1792) + 479.000
Base Station	0 ≤ N ≤ 1199	0.025(N-1) + 460.000
	539 ≤ N ≤ 871	0.025(N-512) + 421.000
	1039 ≤ N ≤ 1473	0.025(N-1024) + 461.000
	1792 ≤ N ≤ 2016	0.025(N-1792) + 489.000

Frequency Deviation

Band Class	Deviation (below CDMA forward channel carrier frequency)
0	45 MHz ± 300 Hz
1	80 MHz ± 150 Hz
5	10 MHz ± 300 Hz

- **RECEIVER**

Terminal shall be able to perform excellent receive with receive signal level of -104 dBm and FER < 0.5%

Band Class 0 System Frequency Correspondence

System Designator	Band Subclass	Transmit Frequency Band (MHz) Mobile Station
A	0	869.025 – 880.005
	1	869.025 – 880.005
		889.995 – 893.985
B	0	869.025 – 880.005
	1	880.005 – 889.995

CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 0

Transmitter	CDMA Channel Number	CDMA Frequency Assignment (MHz)
Mobile Station	1 ≤ N ≤ 799	0.030 N + 825.000
	991 ≤ N ≤ 1023	0.030 (N-1023) + 825.000
Base Station	1 ≤ N ≤ 799	0.030 N + 870.000
	991 ≤ N ≤ 1023	0.030 (N-1023) + 870.000

Band Class 1 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz) Mobile Station
B	1950 – 1965
E	1965 – 1970
F	1970 – 1975
C	1975 – 1990

CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 1

Transmitter	CDMA Channel Number	CDMA Frequency Assignment (MHz)
Mobile Station	0 ≤ N ≤ 1199	1850.000 + 0.050 N
Base Station	0 ≤ N ≤ 1199	1930.000 + 0.050 N

Band Class 5 Block Frequency Correspondence and Band Subclasses

Block Designator	Band Subclass	Transmit Frequency Band (MHz) Mobile Station
A	0	462.500 – 467.475
B	1	462.000 – 466.475
C	2	460.000 – 464.800
D	3	421.675 – 425.850
E	4	425.500 – 429.975
F	5	489.000 – 493.480
G	6	465.230 – 469.990
H	7	461.310 – 465.730

CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 5

Transmitter	CDMA Channel Number	CDMA Frequency Assignment (MHz)
Mobile Station	0 ≤ N ≤ 1199	0.025(N-1) + 450.000
	539 ≤ N ≤ 871	0.025(N-512) + 411.000
	1039 ≤ N ≤ 1473	0.025(N-1024) + 451.000
	1792 ≤ N ≤ 2016	0.025(N-1792) + 479.000
Base Station	0 ≤ N ≤ 1199	0.025(N-1) + 460.000
	539 ≤ N ≤ 871	0.025(N-512) + 421.000
	1039 ≤ N ≤ 1473	0.025(N-1024) + 461.000
	1792 ≤ N ≤ 2016	0.025(N-1792) + 489.000

Documentations Requirements

1. Completed Application Forms: Application Form (FR.PM.5), Inspection Form (FR.PM.4), Power of Attorney to *TEKNOKRAT* Indonesia
2. Technical Constructive File: General information, Installation guide, User manual, BOM, Hardware description, Block diagram, Assembly Top/Bottom, Conducted test report (RF / Telecom and EMC & Safety test)
3. Copy of Certificates of Compliance (from other country)