

With compliments
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CHAPTER 5 SPECIFICATIONS

- (1) Line capacity 64 lines (8 lines × 8 groups), Bidirectional
- (2) Signaling Loop start signaling (two wires)
- (3) Dialing signals
 - a) DP (Dial Pulse)

Item		Variable range	Tolerance
Speed		5 to 25 PPS	±2 PPS of the standard value
Make ratio (%)		20 to 70%	±3% of the standard value
Pause (between each digit)	20 PPS	128 to 6,140 ms	—

b) DTMF (Dial Tone Multi-Frequency)

i) Speed

Item	Variable range	Tolerance
DTMF transmission time	20 to 100 ms	±2 ms of the standard value
DTMF pause time	20 to 100 ms	

ii) Frequency deviation and transmission level

Nominal frequency	L1	L2	L3	L4	H1	H2	H3	H4
	697Hz	770Hz	825Hz	941Hz	1209Hz	1336Hz	1477Hz	1633Hz
Item	Standard							
Frequency deviation	$\pm 1.5\%$							
Transmission level	L1-L4	-10 ± 2 dBm						
	H1-H4	-7 ± 2 dBm						

(4) Maximum number of digits output 48 digits

(5) Loop current ranges

Variable range	Tolerance
10, 15, 20, 25, 30, 34, 40, 45 mA	± 3 mA of the nominal value

(6) Reception of signals

a) Reception of dial tone (DT), ring back-tone (RBT), and busy tone (BT) signals

Receive tones (abbr.)	Range of receive frequency	Range of receive level
DT/RBT/BT	154 - 200 Hz	-20 to 0 dBm
	201 - 800 Hz	-25 to 0 dBm
	801 - 1000 Hz	-20 to 0 dBm
	1001 - 2000 Hz	-15 to 0 dBm

b) Reception of ringing (RG) signals

Receive signal (abbr.)	Range of receive frequency (sine wave)	Range of receive level (sine wave)
RG	13 to 36 Hz	35 Vrms or more
	200 to 500 Hz (Note)	15 dBm or more
	501 to 3400 Hz (Note)	10 dBm or more

Note: Only use for the Loop Back Test.

c) Reception of path check signals

i) Transmit signal specification

Transmission frequency		Transmission level
DTMF	Two out of eight frequencies (L1 to L4 and H1 to H4)	-6 dBm

ii) Reception specification

Receive frequency name		Range of receive frequency	Range of receive level
H4 of DTMF		1500 to 2500 Hz	-25 to -5 dBm
DTMF	Two out of eight frequencies (L1 to L4 and H1 to H4)	$\pm 1.5\%$ of the nominal frequency of the DTMF	-25 to 0 dBm

d) Reception of ID signals

i) Transmission signals specification

Any two frequencies are selected from (3) b) DTMF ii) "Frequency deviation and transmission level" specified above.

ii) Reception specification

Receive frequency name		Range of receive frequency	Range of receive level
DTMF	Two out of eight frequencies (L1 to L4 and H1 to H4)	$\pm 1.5\%$ of the nominal frequency of the DTMF	-25 to 0 dBm

e) Transmission level of tracer tone
1,000 Hz, 0dbm

(7) Operating modes

a) Operation

i) Asynchronous mode

ii) Synchronous mode

iii) Sequential mode

b) Call direction

i) Four-pattern fixed-call directions

ii) Call inversion (INV) mode

(8) Faulty line hold modes

a) Hold 1: Faulty lines are held while other lines are accessed.

b) Hold 2: When a fault occurs, the faulty line is held immediately and other lines are held after the current sequence terminates.

c) Hold 3: Faulty lines are held and access to all other lines is disabled at the same time.

d) Hold 4: If successive five faults have occurred on a line, that line make busy while other lines are accessed.

- (9) Aural monitoring
 - a) Specified line tests can be monitored aurally.
- (10) Tests during a simulation
 - a) Dial tone (DT1, DT2, DT3)
 - b) Ring back tone (RBT) receive
 - c) Ringing tone receive
 - d) Path check
 - e) ID test
 - f) Polarity inversion
 - g) Ring trip (RG break)
 - h) Detection of specified signals
 - i) Call mixing
 - j) DT remove
 - k) Others
- (11) Traffic tests
 - a) Total number of calls
 - b) Number and ratio of completed calls
 - c) Number and ratio of incomplete calls
 - d) Number and ratio of dial tone delay calls
 - e) Number and ratio of defective calls
- (12) Test sequence patterns
 - a) Basic sequence
 - b) Shortrun sequence
 - c) Flashing sequence

(13) Print outs

- a) Traffic measurement results
- b) Test conditions
- c) Real time fault data
- d) Hourly traffic data
- e) Call mixing schedule
- f) List of the latest 100 faults

(14) Interfaces

- a) GP-IB
- b) RS-232C
 - * Speed: 300, 600, 1200, 2400, 4800 bps
 - * Data length: 7 or 8 bits
 - * Start bit length: 1
 - * Stop bit length: 1, 1.5, or 2
 - * Parity: Even, odd, or none
 - * Character type: ASCII (used for the printer)

(15) Self-test functions

- a) Loop-back test
- b) Dial pulse and tone receive test using the pseudo-exchange
- c) Backup memory test

(16) Power source: 85 to 265 VAC

(17) Environment: Ambient temperature = 5° to 45°C
Relative humidity = 30 to 85%