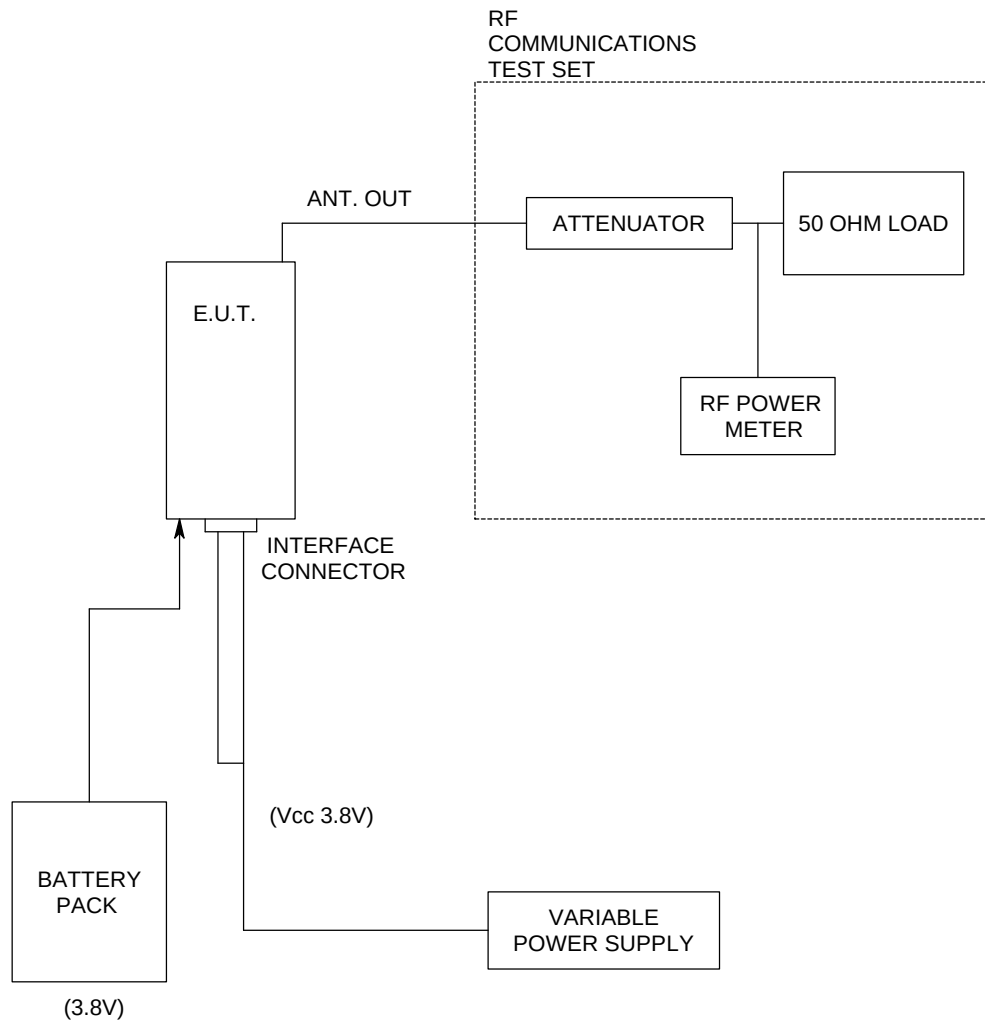


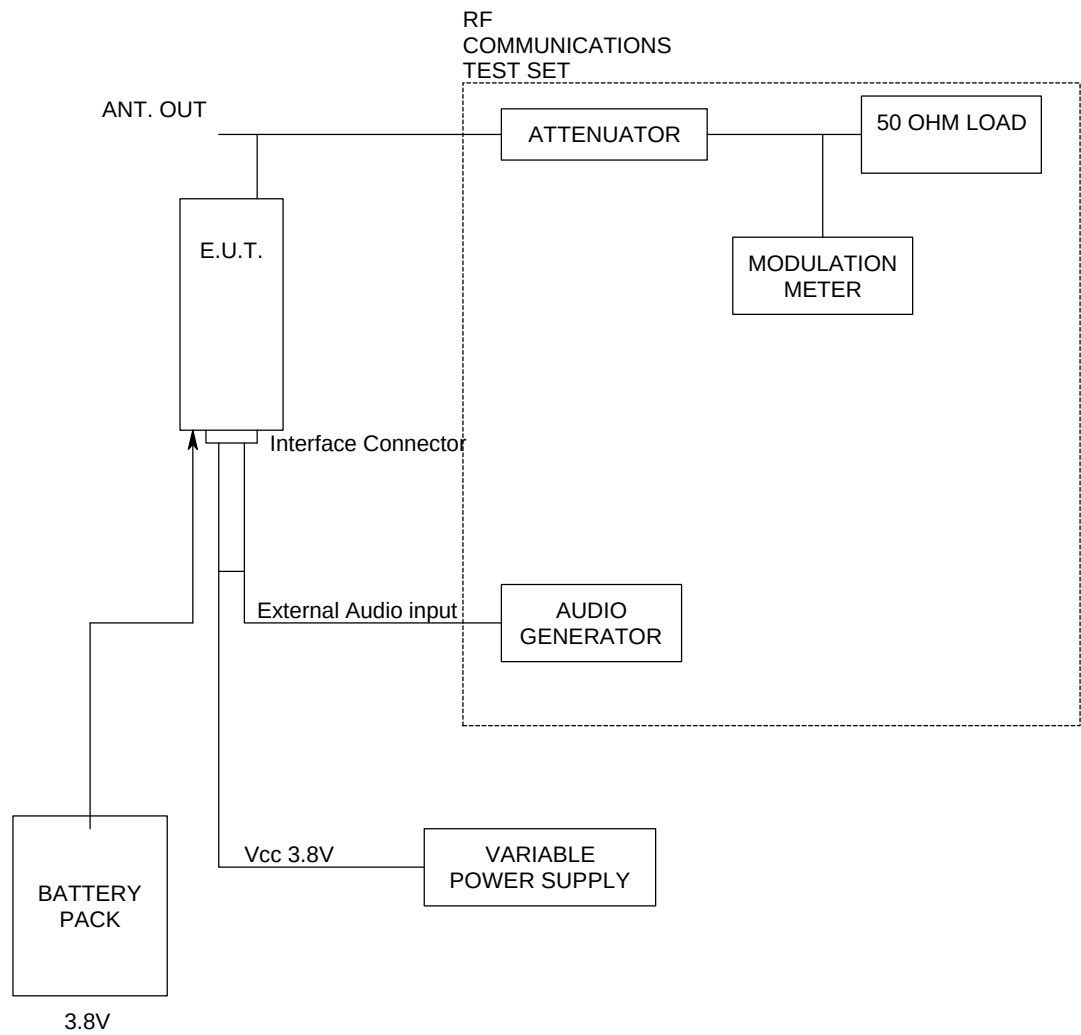
POWER OUTPUT 2.985

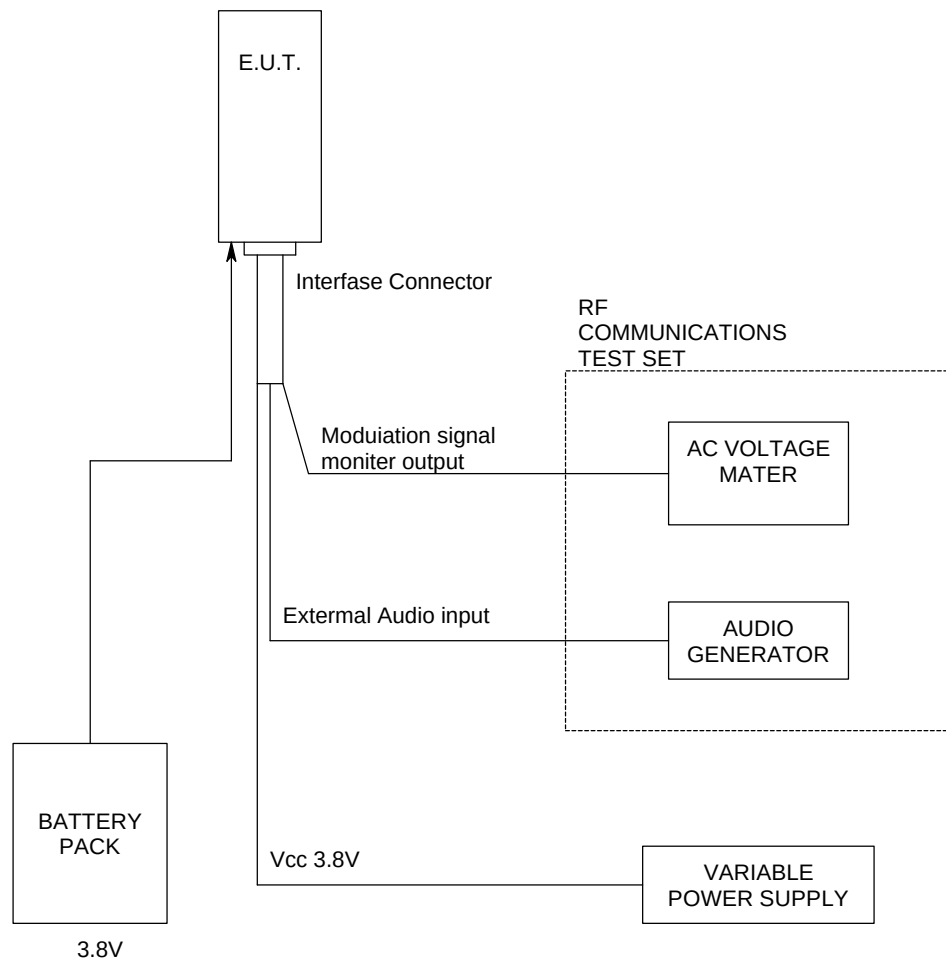


FCC ID:NRTNSA2010

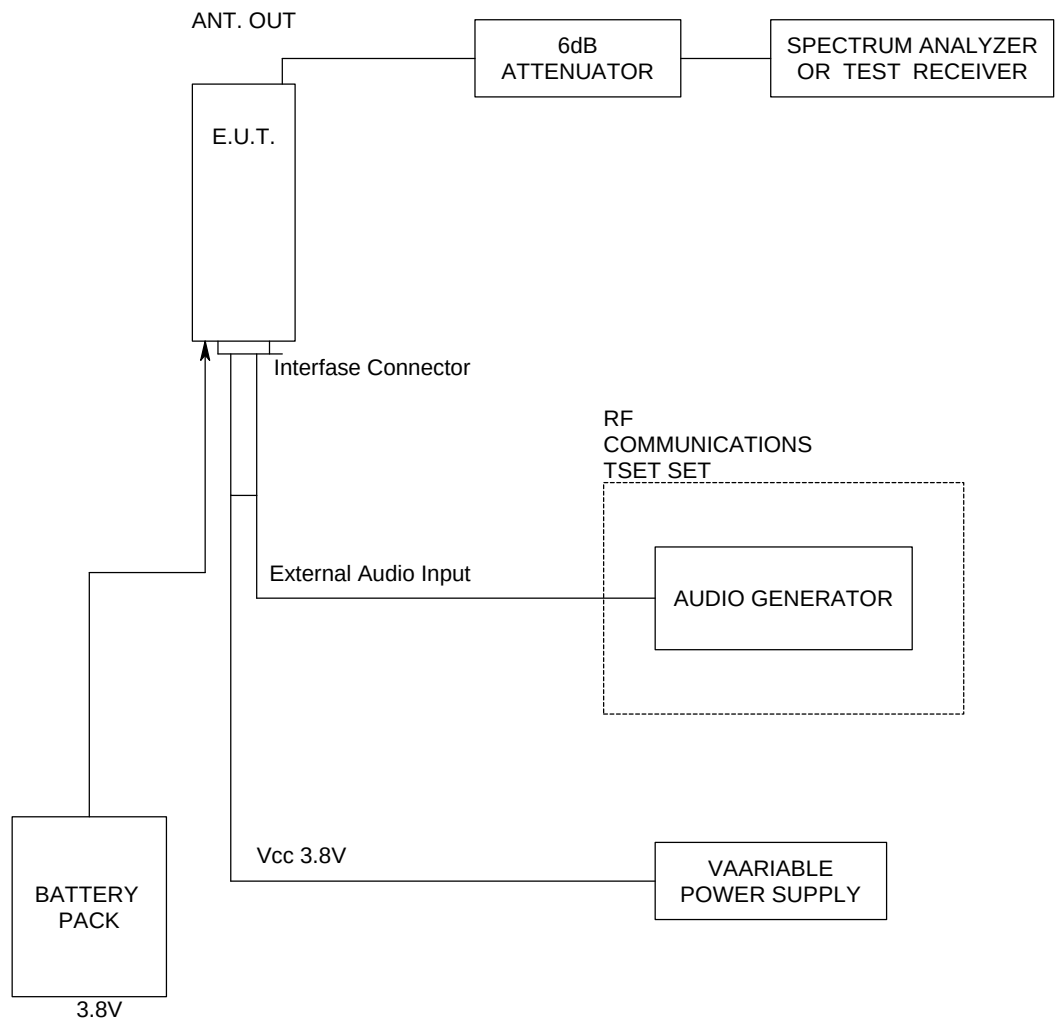
AUDIO FREQUENCY RESPONSE 2.987(a)

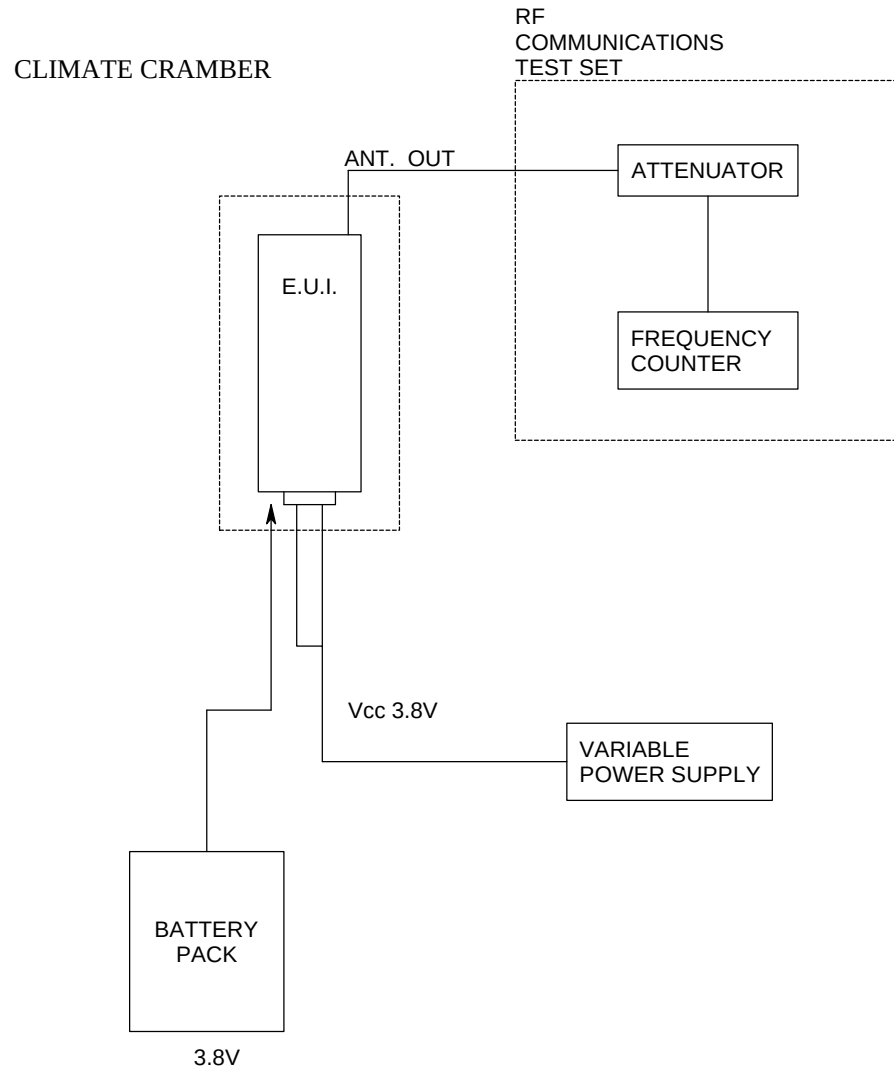
MODULATION LIMITING 2.897(b)





OCCUPIED BANDWIDTH 2.989(c)(1)
SPURIOUS EMISSIONS 2.991





How to use test command for NSA2010

This paper describes test command operation for the AMPS cellular phone, NSA2010.

1. To enter test mode

- 1.1 The unit must be standing at idling mode before entering test mode.
- 1.2 Press the key pads as following sequence when entering test mode.
[5][4][#][3][MENU][2][#] ; [] means key pad
- 1.3 You can see a message , shown in below, on the LCD after completed above key entry.

" TEST MODE "

Now, you are in test mode and can start test the unit using test command in accordance with TEST COMMAND LIST on attacked.

2. To set command for making test conditions

The test command set can be achieved as following key operations;

[c][d][SEND][nn]

where;c = first digit of the Command

d = second digit of the Command

SEND = key of STR

nn = added any bits sub data (if required)

The codes are assigned to key pads as following;

<u>Code</u>	<u>assigned key</u>	<u>Code</u>	<u>assigned key</u>
0 - 9	0 - 9	D	MAIL
A	*	E	MEM
B	#	F	MENU
C	CLR		

PAGE No.43

Mode:

M0 ; Send command without sub code (nn)

M1 ; Send command with sub code (nn)

M2 ; Send command and display data status on the LCD

note: the data on test command list, "1d" means 0.5 byte (= 1 digit) for key entry and 1 byte for data input by UART.

3. Example

You want to obtain;

transmitting with , channel = 383, RF attenuation (power level)= 0,

modulation = Signaling Tone , ST

The setting sequence is;

- * Load synthesizer with channel 383
- * Set attenuation
- * Set ST
- * Carrier on

The key sequence is;

[8][3][SEND][0][3][8][3][8][4][SEND][0][8][F][SEND][8][1][SEND]

Note that set commands remain until release command added

STATUS (5F.0.3) FORMAT

Bit	7	6	5	4	3	2	1	0
Byte1	S7	S6	S5	S4	S3	S2	S1	S0
Byte2	C1	C2	0	CARR	TN	0	S9	S8
Byte3	PL2	PL1	PL0	BI	MODE	WS	RXM	TXM

S9..S0 Channel Number bits(Binary coded representation of Channel number
S9 = MSB

PL2,1,0 Power level bits(PL0 - 7, PL2=MSB, Carrier=1(ON))

CARR Carrier(1=ON)

TN Signaling Tone (ST: 1=ON)

TXM TX Audio Mute (1=muted)

TXM RX Audio Mute (1=muted)

WS Word Synchronization (1=WS acquired)

MODE 1=Control Channel, 0=Voice channel)

BI Current state of the majority voted B/I bit (0=Busy, 1=Idle)

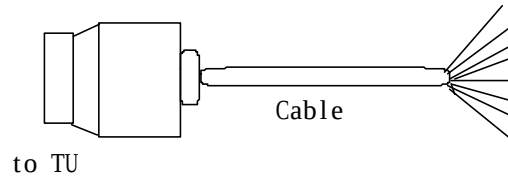
C1,C2 SAT Frequency is encoded as follows;

C1	C2	Frequency
0	0	5970Hz
0	1	6000Hz
1	0	6030Hz
1	1	No SAT Lock

DTMF FREQUENCY

Lable of Key	Assigned Frequencies	
	HT(Hz)	LT(Hz)
1	1209	697
2	1336	697
3	1447	697
4	1209	770
5	1336	770
6	1477	770
7	1209	852
8	1336	852
9	1477	852
*	1209	941
0	1336	941
#	1477	941

I/F Connector



to TU

Connection
pin #

Function

1	VD(Digital voltage)
2	SWEV(External voltage switch)
3	RST(System reset)
4	VSNS(Voltage sense)
5	VP(Programming voltage)
6	VCC (3.8V Power Supply)
7	RMUTO (Radio mute control output)
8	RSSIV(RSSI DC voltage output)
9	AFI(Audio input)
10	Mode (Modulation signal monitor output)
11	IGNS(Ignition sense input for Hands free operation)
12	AFO (Audio output)
13	RXD (UART reception)
14	TXD (UART transmission)
15	HFS (Hands Free sense)
16	GND (Ground)