

FUNCTION OF SEMICONDUCTORS

HH985(UT871Z)

REF No	DESCRIPTION	MANUFACTUER	CIRCUIT FUNCTION
D101	RLS135	ROHM	ANTENNA SWITCH
D102	1SS226	TOSHIBA	RX FRONTEND PROTECTOR
D105	1SS226	TOSHIBA	SQUELCH DETECTOR
D202	RLS135	ROHM	ANTENNA SWITCH
D291	HZK4C	HITACHI	REGULATOR FOR TX RF POWER CONTROL
D301	HSMGC660#502	HEWLETT PACKARD	BACK LIGHT LED
D302	HSMGC660#502	HEWLETT PACKARD	BACK LIGHT LED
D306	HZK6C	HITACHI	ESD PROTECTOR
D307	HZK6C	HITACHI	ESD PROTECTOR
D310	CL190G-CD	CITIZEN	BACK LIGHT LED
D311	CL190G-CD	CITIZEN	BACK LIGHT LED
D313	HZK6C	HITACHI	ESD PROTECTOR
D501	HVU350	HITACHI	VCO
IC101	MC3361CDR2	MOTOROLA	RX 2nd MIXER, 2nd IF AMP AND DETECTOR
IC251	NJM2100M	JRC	MIC AMP, LIMITER, LOW-PASS FILTER
IC301	93LC46T-1/SN	MICROCHIP	BACK-UP MEMORY
IC302	TC4S66F	TOSHIBA	RX AF SWITCHING
IC303	uPD789405	NEC	MICROPROCESSOR
IC305	NJM386M	JRC	RX AF POWER AMPLIFIER
IC306	RH5RL36AA	RICOH	3.6V VOLTAGE REGULATOR
IC307	RH5VL28AA	RICOH	CPU RESET CIRCUIT
IC308	NJM2100M	JRC	BAND-PASS FILTER FOR WEATHER ALERT
IC310	SM8222BS	NPC	FSK DECODER FOR S.A.M.E.
IC401	RN5RZ35BA	RICOH	3.5V VOLTAGE REGULATOR
IC421	TB31202FN	TOSHIBA	PLL
MO201	M68732H	MITSUBISHI	TX RF POWER AMPLIFIER
Q101	2SC4226	NEC	RX RF AMPLIFIER
Q102	2SC4226	NEC	RX RF AMPLIFIER
Q103	2SC4226	NEC	RX 1st MIXER
Q105	2SC1623	NEC	RX AF AMPLIFIER
Q106	2SC1623	NEC	NOISE AMPLIFIER FOR RX SQUELCH
Q107	2SA1162	TOSHIBA	RX POWER SOURCE SWITCHING
Q201	2SC4226	NEC	TX RF AMPLIFIER
Q202	2SC3357	NEC	TX RF AMPLIFIER
Q211	2SB1115	NEC	TX INHIBIT SWITCHING
Q212	2SC1623	NEC	TX INHIBIT SWITCHING
Q221	2SA1162	TOSHIBA	TX POWER SOURCE SWITCHING
Q301	2SC1623	NEC	BATTERY SENSOR
Q302	2SC1623	NEC	BACK LIGHT LED SWITCHING
Q303	2SB1115	NEC	RX AF POWER SOURCE SWITCHING
Q305	2SC1623	NEC	RX AF MUTE
Q307	2SC1623	NEC	RX AF POWER SOURCE SWITCHING
Q308	S2SA1162	TOSHIBA	RX BAND-PASS FILTER SWITCHING
Q310	2SC2712	TOSHIBA	TX MIC AF AMPLIFIER
Q311	2SA1162	TOSHIBA	PUSH TO TALK SWITCHING
Q421	2SA1162Y	TOSHIBA	PLL POWER SOURCE SWITCHING
Q422	DTC144EU	ROHM	RX VCO SWITCHING
Q501	2SC4177	NEC	RIPPLE FILTER
Q502	2SC4226	NEC	VCO
Q503	2SC2714	TOSHIBA	VCO BUFFER
Q504	2SC5065	NEC	RX VCO SWITCHING

ALIGNMENT

ALIGNMENT PROCEDURE FOR MODEL HH985(UT871Z)

PLL SYNTHESIZER

STEP	MODE	CHANNEL	FREQUENCY	CONDITION / CONNECTION	ADJUST	METHOD
1	TX	88	157.425MHz	DC VOLTMETER TO "V CONT"	-	CHECK THE VOLTAGE "LESS THAN 2V DC".
2	TX	1	156.05MHz	SAME AS STEP 1	-	CHECK THE VOLTAGE "MORE THAN 1V DC".
3	RX	1	156.05MHz	SAME AS STEP 1	-	CHECK THE VOLTAGE "MORE THAN 1V DC".
4	RX	WX 0	163.275MHz	SAME AS STEP 1	-	CHECK THE VOLTAGE "LESS THAN 2V DC".
5	TX	14	156.7MHz	FREQUENCY COUNTER TO ANTENNA TERMINAL THROUGH THE RF ATTENUATOR.	CT421	ADJUST CT421 WITHIN 156.7MHz +/- 10Hz.

RECEIVER

RF SIGNAL GENERATOR : 1kHz +/- 3kHz MODULATION

STEP	MODE	CHANNEL	FREQUENCY	CONDITION / CONNECTION	ADJUST	METHOD
1	RX	14	156.7MHz	DC VOLTMETER TO "TP101", RF SIGNAL GENERATOR TO ANTENNA TERMINAL.	L116	ADJUST L116 TO OBTAIN 1V DC AT 1000uV NON MODULATED RF INPUT.
2	RX	14	156.7MHz	RF SIGNAL GENERATOR TO ANTENNA TERMINAL. AF LEVEL METER TO EXTERNAL SPEAKER JACK WITH 8 OHMS DUMMY LOAD. SQUELCH CONTROL : C.W.	RT101	ADJUST RT101 TO OBTAIN SQUELCH OPEN POINT AT 1uV RF INPUT.

TRANSMITTER

STEP	MODE	CHANNEL	FREQUENCY	CONDITION / CONNECTION	ADJUST	METHOD
1	TX	14	156.7MHz	RF POWER METER TO ANTENNA TERMINAL.	RT291	ADJUST RT291 TO OBTAIN 4.5W RF OUTPUT POWER.
2	TX LOW PWR	14	156.7MHz	RF POWER METER TO ANTENNA TERMINAL.SET LOW POWER.	-	CHECK THE RF OUTPUT POWER "LESS THAN 1W".
3	TX	14	156.7MHz	FM LINEAR DETECTOR TO ANTENNA TERMINAL THROUGH THE RF ATTENUATOR. 1kHz 100mV RMS AF SIGNAL TO MIC INPUT.	RT263	ADJUST RT263 TO OBTAIN +/- 4.5kHz MODULATION.