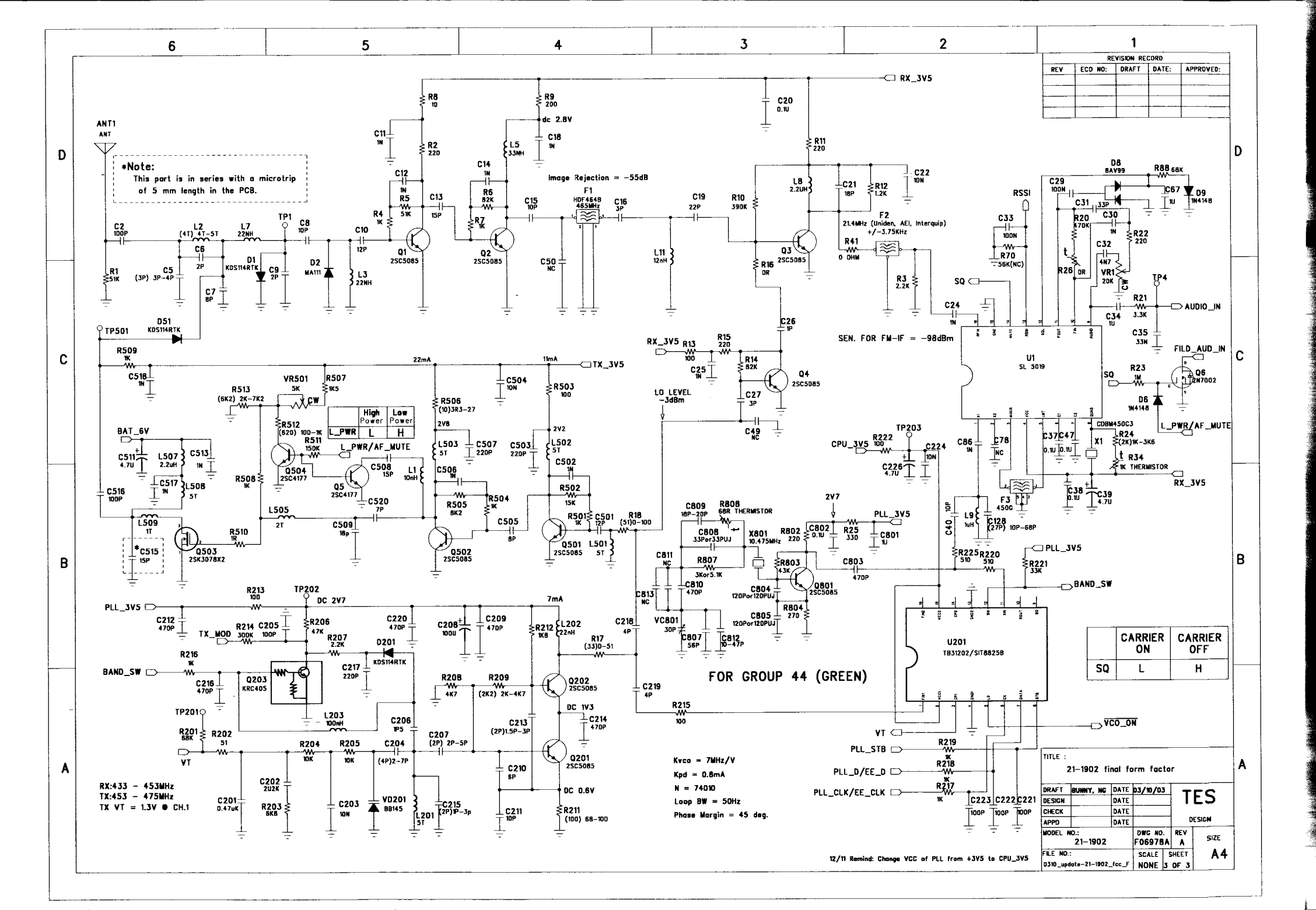
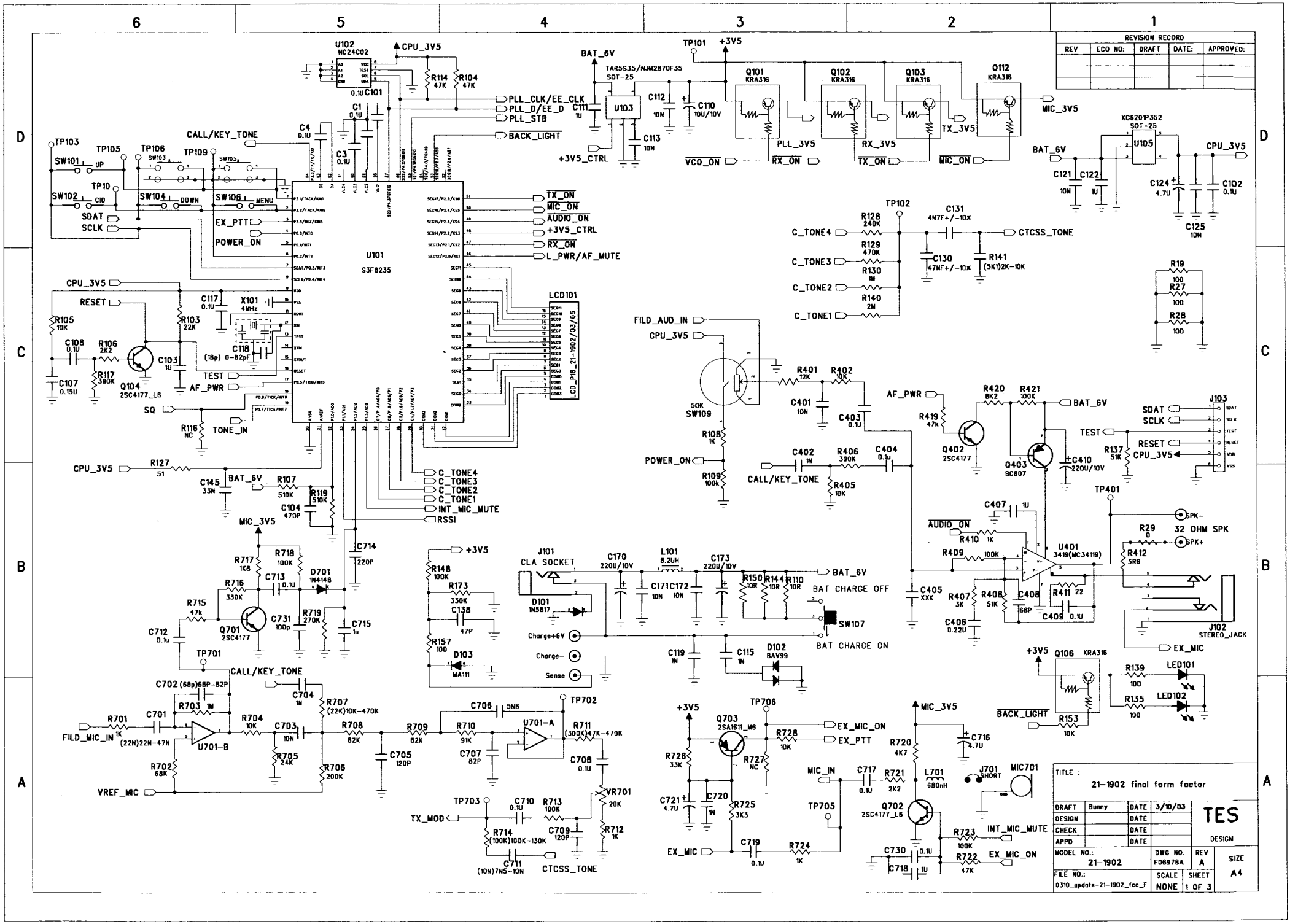
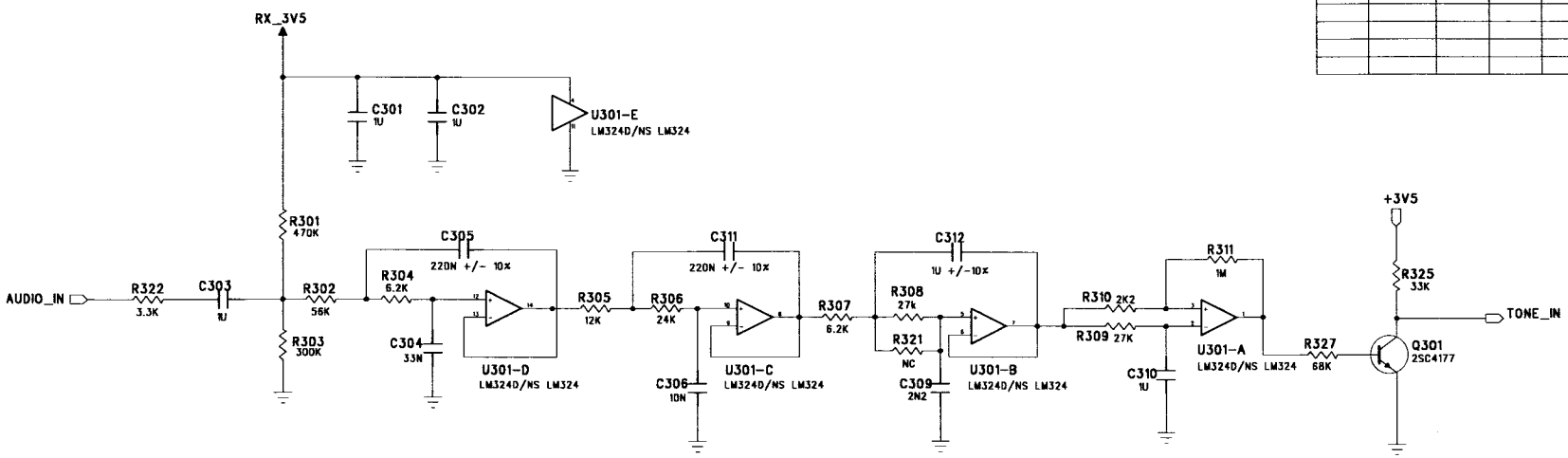
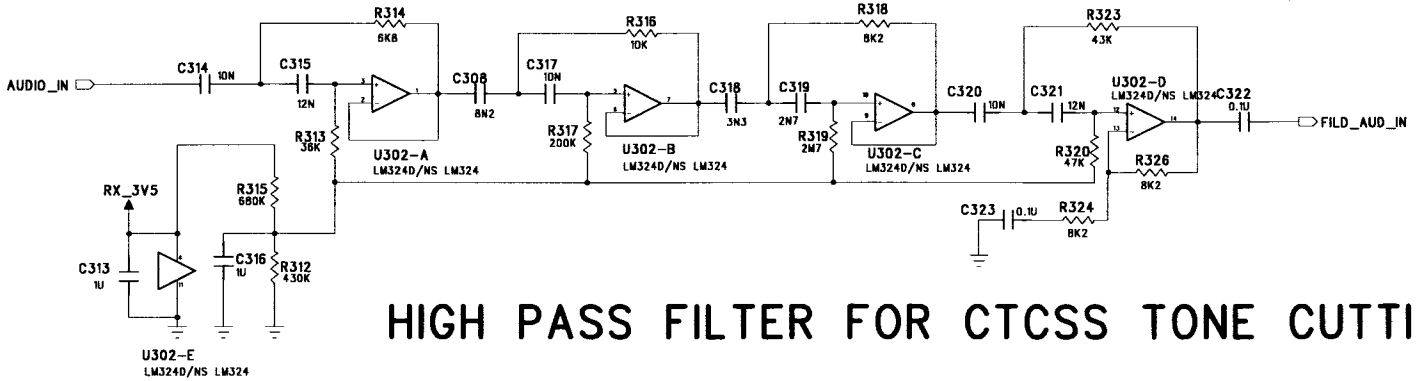

REVISION RECORD
REV | ECO NO: | DRAFT | DATE: | APPROVED:
*Note:
This part is in series with a microtrip of 5 mm length in the PCB.
Image Rejection = -55dB
SEN. FOR FM-IF = -98dBm
LO LEVEL -3dBm
FOR GROUP 44 (GREEN)
RX:433 - 453MHz
TX:453 - 475MHz
TX VT = 1.3V ● CH.1
Kvco = 7MHz/V
Kpd = 0.8mA
N = 74010
Loop BW = 50Hz
Phase Margin = 45 deg.
12/11 Remind: Change VCC of PLL from +3V5 to CPU_3V5
SQ | CARRIER ON | CARRIER OFF
SQ | L | H
TITLE : 21-1902 final form factor
DRAFT BUNNY, NG 03/10/03
DESIGN
CHECK
APPD
TES DESIGN
MODEL NO.: 21-1902
DWG NO. F06978A
REV A
SIZE A4
FILE NO.: 0310_update-21-1902_fcc_F
SCALE NONE
SHEET 3 OF 3


REVISION RECORD
REV | ECO NO: | DRAFT | DATE: | APPROVED:
U102 NC24C02
CPU_3V5
R114 47K
R104 47K
0.1U C101
C1 0.1U
PLL_CLK/EE_CLK
PLL_D/EE_D
PLL_STB
BACK_LIGHT
BAT_6V
TAR5S35/NJM2870F35 SOT-25
U103
C111 1U
C112 10N
C110 10U/10V
C113 10N
+3V5_CTRL
TP101 +3V5
Q101 KRA316
Q102 KRA316
Q103 KRA316
Q112 KRA316
MIC_3V5
PLL_3V5
RX_3V5
TX_3V5
VCO_ON
RX_ON
TX_ON
MIC_ON
XC6201P352 SOT-25
U105
C121 10N
C122 1U
C124 4.7U
C102 0.1U
C125 10N
TP103
TP105
TP106
TP109
SW101 UP
SW102 CID
SW104 DOWN
SW106 MENU
TP10
SDAT
SCLK
CALL/KEY_TONE
C4 0.1U
C3 0.1U
EX_PTT
POWER_ON
U101
S3F8235
TX_ON
MIC_ON
AUDIO_ON
+3V5_CTRL
RX_ON
L_PWR/AF_MUTE
LCD101
LCD_P16_21-1902/03/05
TP102
C_TONE4
C_TONE3
C_TONE2
C_TONE1
R128 240K
R129 470K
R130 1M
R140 2M
C131 4N7F+/-10%
C130 47NF+/-10%
R141 (5K1)2K-10K
CTCSS_TONE
R19 100
R27 100
R28 100
CPU_3V5
RESET
R105 10K
R103 22K
C117 0.1U
X101 4MHz
C118 (18p) 0-82pF
C108 0.1U
R106 2K2
C103 1U
C107 0.15U
R117 390K
Q104 2SC4177_L6
TEST
AF_PWR
SQ
R116 NC
TONE_IN
R127 51
C145 33N
BAT_6V
R107 510K
R119 510K
C104 470P
INT_MIC_MUTE
RSSI
FILD_AUD_IN
50K SW109
R108 1K
R109 100K
R401 12K
R402 10K
C401 10N
C403 0.1U
C402 1N
R406 390K
C404 0.1U
R405 10K
R419 47K
R420 8K2
R421 100K
Q402 2SC4177
Q403 BC807
C410 220U/10V
J103
R137 51K
C714 220P
R717 1K8
R718 100K
C713 0.1U
D701 1N4148
R716 330K
R715 47K
Q701 2SC4177
C731 100P
R719 270K
C715 1U
C712 0.1U
TP701
+3V5
R148 100K
R173 330K
C138 47P
R157 10D
D103 MA111
J101 CLA SOCKET
Charge+6V
Charge-
Sense
C170 220U/10V
L101 8.2UH
C173 220U/10V
C171 10N
C172 10N
D101 1N5817
R150 10R
R144 10R
R110 10R
BAT CHARGE OFF
SW107
BAT CHARGE ON
C119 1N
C115 1N
D102 BAV99
AUDIO_ON
R410 1K
C407 1U
R409 100K
U401 3419(MC34119)
C405 XXX
R407 3K
R408 51K
C408 68P
R411 22
C409 0.1U
C406 0.22U
TP401
SPK-
SPK+
R29 0
32 OHM SPK
R412 5R6
J102 STEREO_JACK
EX_MIC
+3V5
Q106 KRA316
R139 100
LED101
R135 100
LED102
BACK_LIGHT
R153 10K
CALL/KEY_TONE
C702 (68p)68P-82P
C704 1N
R707 (22K)10K-470K
R703 1M
C706 5N6
TP702
R701 1K
C701 (22N)22N-47N
FILD_MIC_IN
U701-B
R704 10K
C703 10N
R708 82K
R709 82K
R710 91K
U701-A
R711 (300K)47K-470K
C708 0.1U
R702 68K
R705 24K
R706 200K
C705 120P
C707 82P
VREF_MIC
TP703
TX_MOD
C710 0.1U
R713 100K
R714 (100K)100K-130K
C709 120P
VR701 20K
R712 1K
C711 (10N)7N5-10N
CTCSS_TONE
+3V5
TP706
Q703 2SA1611_M6
EX_MIC_ON
EX_PTT
R728 10K
R726 3.3K
R727 NC
C721 4.7U
C720 1N
R725 3K3
EX_MIC
C719 0.1U
R724 1K
MIC_IN
TP705
C717 0.1U
R721 2K2
L701 680nH
J701 SHORT
MIC701
Q702 2SC4177_L6
C730 0.1U
C718 1U
R723 100K
INT_MIC_MUTE
R722 47K
EX_MIC_ON
MIC_3V5
R720 4K7
C716 4.7U
TITLE :
21-1902 final form factor
DRAFT | Bunny | DATE | 3/10/03
DESIGN | DATE
CHECK | DATE
APPD | DATE
TES
DESIGN
MODEL NO.: 21-1902
DWG NO. F06978A
REV A
SIZE A4
FILE NO.: 0310_update-21-1902_fcc_F
SCALE NONE
SHEET 1 OF 3

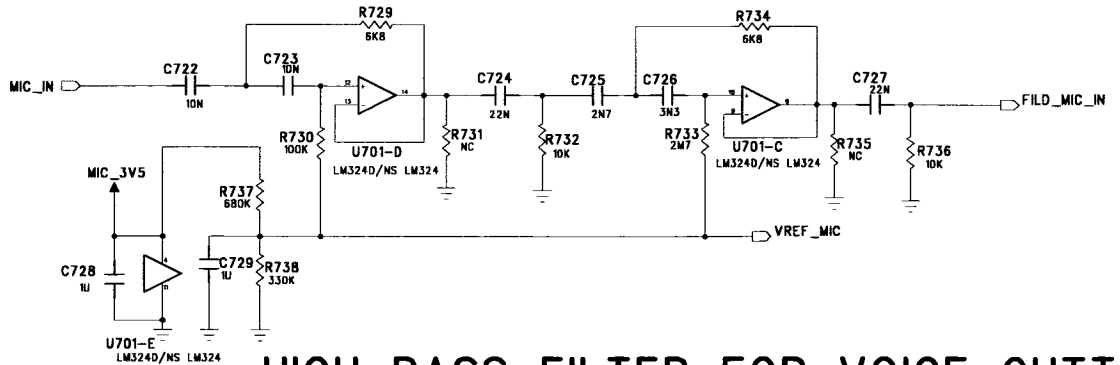
REVISION RECORD				
REV	ECO NO:	DRAFT	DATE:	APPROVED:



LOW PASS FILTER FOR CTCSS TONE DETECTION



HIGH PASS FILTER FOR CTCSS TONE CUTTING



HIGH PASS FILTER FOR VOICE CUTTING

TITLE : 21-1902 final form factor				
DRAFT	BUNNY. NG	DATE	03/10/03	TES
DESIGN		DATE		DESIGN
CHECK		DATE		
APPD		DATE		
MODEL NO.: 21-1902		DWG NO.	REV	SIZE
		F06978A	A	A4
FILE NO.: 0310_update-21-1902_fcc_F		SCALE	SHEET	
		NONE	2 OF 3	