



TSS-1100

6 – Piece Home Theater System

SERVICE MANUAL



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SPECIFICATIONS

Satellites & Center Channel

Frequency Range:	120Hz – 20,000Hz (± 3 dB)	
Recommended Amplifier Power Range:	10 – 125 watts	
Sensitivity: (2.83V @ 1 meter)	89dB	
Nominal Impedance:	8 ohms	
Crossover Frequency:	3500Hz, 24dB/Octave	
Midrange Driver(s):	Dual 3-1/2" MMD, magnetically shielded	
High-Frequency Driver:	3/4" MMD, magnetically shielded	
Dimensions (H x W x D):	6" x 4-1/8" x 4-3/8" (152mm x 105mm x 111mm)	
Weight:	Satellite	Center Channel
	2.8 lb (1.3kg)	4.5 lb (2.0kg)

TSS-1100 Subwoofer

Frequency Range:	29Hz – 150Hz (± 3 dB)
Amplifier Output:	250 watts RMS
Low-Frequency Driver:	12" (305mm)
Crossover Frequency:	50Hz – 150Hz, 24dB/Octave, continuously variable
Dimensions (H x W x D):	17-3/4" x 12" x 16-1/8" (451mm x 305mm x 410mm)
Weight:	44 lb (20kg)

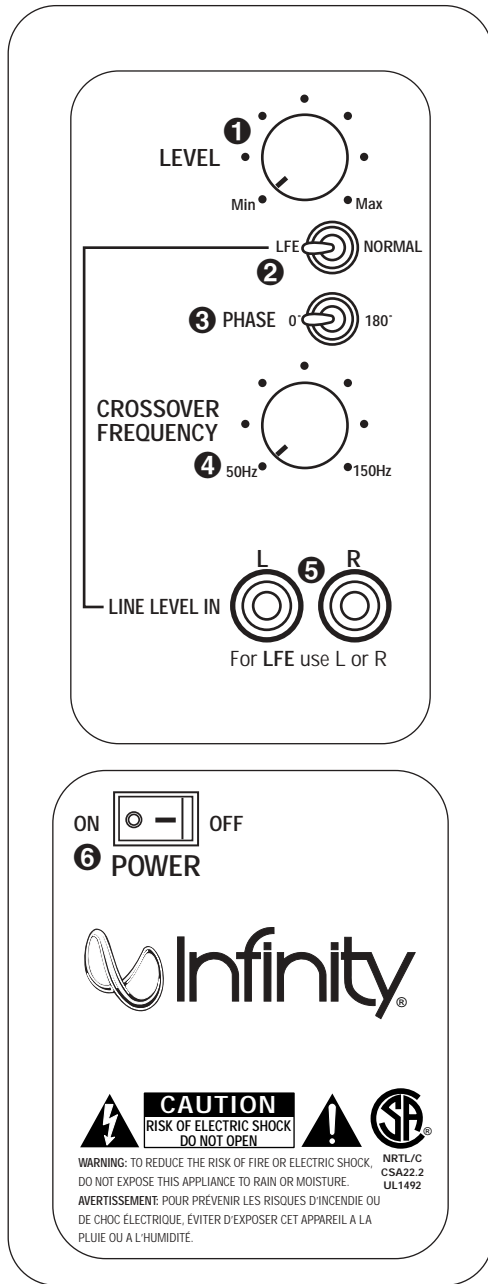
Infinity continually strives to update and improve existing products, as well as create new ones. The specifications and construction details in this and related Infinity publications are therefore subject to change without notice.

TSS-1100 150W Powered Sub/ Plate Amp					
LINE VOLTAGE	Yes/No	Hi/Lo Line	Nom.	Unit	Notes
US 120vac/60Hz	Yes	108-132	120	Vrms	Normal Operation
EU 230vac/50-60Hz	Yes	207-264	230	Vrms	Normal operation, MOMS required
Parameter	Specification	Unit	QA Test Limits	Conditions	Notes
Amp Section					
Type (Class AB, D, other)	D				
Load Impedance (speaker)	5.6	Ohms	n/a	Nominal	
Rated Output Power (120VAC)	150	Watts	110		Domestic version only 120 VAC-60 Hz
Rated Output Power (230VAC)	150	Watts	110		EU Version only 230 VAC-50 Hz
AVG RMS Dynamic Power	250	Watts	225		Average RMS power, 3/20 Cycles 50 Hz, Driven 6dB above its input sensitivity sensitivity
THD @ Rated Power	0.5	%	1	22K filter	145 Watts
THD @ 1 Watt	0.1	%	0.5	22K filter	
DC Offset	10	mV-DC	30	Amplifier output	
Damping factor	>50	DF	20	Measured at amplifier board	Measured at the amplifier board. 120 Watts @ 50 Hz, THD must be less tan 0.1%
Input Sensitivity					
Input Frequency	35	Hz	35	Nominal Freq.	
L&R	188	mVrms	±2dB	To 110 Watts, Ap Zo=600 Ohms	Single input driven
L or R input	188	mVrms	±2dB	To 110 Watts , Ap Zo=600 Ohms	Single input driven, LFE switch ON
Speaker/Hi Level Input	1.68	Vrms	±2dB	To 120 Watts	Single input driven, LP switch to Normal, This applies to 230VAC model only
Signal to Noise					
SNR-A-Weighted	90	dBA	85	relative to rated power	A-Weighting filter
SNR-unweighted	85	dBr	80	relative to rated power	22K filter
SNR rel. 1W-unweighted	65	dBr	60	relative to 1W Output	22K filter
Residual Noise Floor	1	mVrms(max)	1.5	Volume @max, w/ A/P Swept Bandpass Measurement (Line freq.+ harmonics) (BW=20 Khz)	Line level inputs must be terminated using 1KOHM
Input Impedance					
Line Input (L, R,LFE)	10K	ohms	n/a	Nominal	
Speaker/Hi Level Input	> 4.7K	ohms	n/a	Nominal	
Filters					
LP filter 4th order fixed	50-150	Hz	± 10	2nd Order variable and 2nd order fix	2nd order variable + 2nd order fix-24 db/Octave
HP Filter 2nd order	Fixed				
LFE Low pass 2nd order	200>LP<1K	Hz		LFE input driven only	
Notch filter (Friend circuit)				F=61 Hz, Q=3.607, Av=-8.62dB	
HP speaker out connector	1st order fix				
Left & Right	200	Hz	± 10	Speaker input - Spkr out 4 Ohms	(Applies to 230VAC model only)
Left & Right	100	Hz	± 10	Speaker input - Spkr out 8 Ohms	(Appies to 230VAC model only)
Limiter					
THD at Max. Output Power	n/a	n/a	functional	Maximum Output Power	Maximum THD as a result of limiting.
Features					
Volume pot Taper (lin/log)	LOG	--	functional		A Taper
Speaker input connectors	YES		functional		L&R Speaker input binding post connectors
HP Speaker out	YES		functional		L&R Speaker out with HP applies only to 230VAC models
Phase switch	0-180	deg	functional		
LP Filter defeat switch	YES		functional		Disables LP filter, intended for LFE
Input Configuration					
Line In (L,R) & LFE	YES	--	functional		Dual RCA jack
Spkr/Hi Level In	YES	--	functional		Binding post connector L&R (Applies to 230VAC model only)
Signal Sensing (ATO)					
Auto-Turn-On (yes/no)	YES		functional		
ATO Input test frequency	50	Hz	functional		
ATO Level LFE Input	2	mV	functional		Maximum acceptable level.
ATO Level Speaker in	40	mV	functional		Maximum acceptable level. (Applies to 230VAC model only)
ATO Turn-on time	5	ms	functional	Amp connected and AC on, then input signal applied	
Auto Mute/ Turn-OFF Time	15	minutes	18	T before muting, after line or speaker level signal is removed	Auto turn of time (T) must be 5 > T < 18 Minutes
Power on Delay time	3	sec.	4	AC Power Applied	

Parameter	Specification	Unit	QA Test Limits	Conditions	Notes
Transients/Pops					
ATO Transient	5	mV-peak	n/a	@ Speaker Outputs	
Turn-on Transient	50	mV-peak	2V-pk-pk	@ Speaker Outputs	AC Line cycled from OFF to ON
Turn-off Transient	50	mV-peak	2V-pk-pk	@ Speaker Outputs	AC Line cycled from ON to OFF
Efficiency					
Efficiency	65	%	65		Nominal Line voltage 120 VAC
Stand-by Input Power	18	Watts	20	@ nom. line voltage	Maximum allowable input power under nominal Input voltage and frequency, HOT or COLD operation.
Power Cons. @ rated power	170	Watts	180	@ nom. line voltage	120 Watts into 5.6 Ohms @ nominal line voltage
Protections					
Short Circuit Protection	YES		functional	Direct short at output	Amplifier should resume operation after short circuit condition removal
Thermal Protection	YES		functional	@ 1/8 max unclipped Power at 1.06 times the input voltage	Temperature rise in accessible metal parts should not exceed 35K rise for domestic version or 30K rise for European versions (refer to requirements sheet).
DC Offset Protection	YES		-	DC present at Speaker Out leads	Design must insure no Offset at the speaker output under any operating condition including abnormal operation
Line Fuse Rating					
USA-Domestic	2	Amps	2	Type-T or Slo Blo-250 V	Internal fuse with UL/SEMKO rated holder
EU	1.25	Amps	1.25	Type-T or Slo Blo-250 V, Low Breaking capacity	Internal fuse with UL/SEMKO rated holder

SUBWOOFER CONTROLS

Rear Panel



- 1 Subwoofer-Level Control
- 2 LFE/Normal Switch
- 3 Phase Switch
- 4 Crossover-Frequency Adjustment
- 5 Line-Level (LFE) Inputs
- 6 Power Switch

A Few Suggestions

We recommend that you do not operate your speakers or subwoofer with the bass, treble and loudness controls set to full boost. This will place undue strain on your electronics and speakers and could damage them.

The volume control setting on your processor/preamp or receiver is not a specific indication of the overall loudness level of the speakers. The only important consideration is the loudness level at which the system can be played, regardless of where the volume control is set.

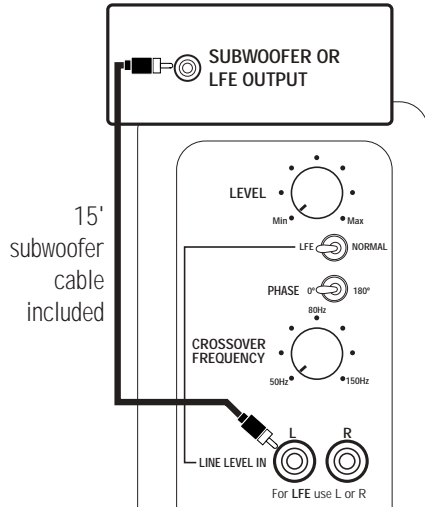
Always turn down the volume control setting on your processor/preamp or receiver when changing a cassette or CD, or switching inputs to AM or FM operation. Excessively loud transients (clicks or popping sounds) can damage the satellite speakers and possibly the subwoofer.

Important!

Whenever changing cables, pulling plugs, etc., ALWAYS TURN OFF ALL EQUIPMENT, including the subwoofer.

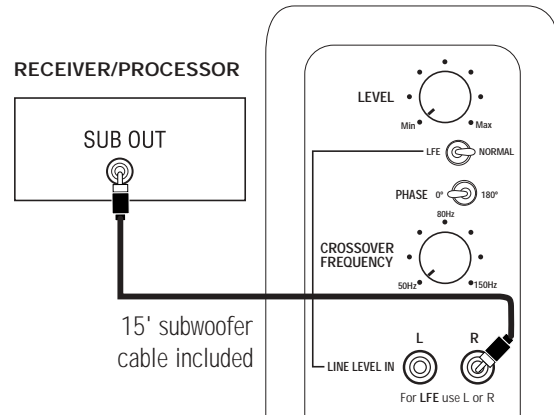
SUBWOOFER CONNECTIONS

If you have a Dolby* Digital or DTS® receiver/processor with a low-frequency-effects (LFE) or subwoofer output:



Set line-level/LFE switch to "LFE."

If your receiver/processor does not contain a Dolby Digital or DTS processor but has a subwoofer output:



Set line-level/LFE switch to "Normal."

NOTE: If your receiver/processor has only one sub out, you may use either the L or R input.

OPERATION

Surround Modes

When using the system in a Dolby Digital or DTS home theater system, make sure all speakers are set to "Small". When using the TSS-1100 in a Dolby Pro Logic* home theater system, make sure the receiver's center channel mode is set to "Normal."

Some Dolby Digital-equipped receivers/processors offer different setup options for each source or surround mode, e.g., CD-stereo, videotape, Dolby, Pro Logic. In each case, follow your equipment's instructions to ensure that the subwoofer output is turned on and that the speakers are set to "Small" in each mode.

Power On

Plug your subwoofer's AC cord into a wall outlet. Do not use the outlets on the back of the receiver.

Initially set the Subwoofer Level Control **1** to the "MIN" position.

Turn on the subwoofer by pressing the Power Switch **6** on the rear panel.

Turn on your entire audio system and start a CD or movie soundtrack at a moderate level.

Auto On/Stand-By

With the Power Switch **6** in the ON position, the LED on the front panel will remain lit in red or green to indicate the On/Stand-By mode of the subwoofer.

RED = STAND-BY (No signal detected, Amp Off)

GREEN = ON (Signal detected, Amp On)

The subwoofer will automatically enter the Stand-By mode after approximately 10 minutes when no signal is detected from your system. The subwoofer will then power ON instantly when a signal is detected. During periods of normal use, the Power Switch **6** can be left on. You may turn off the Power Switch **6** for extended periods of nonoperation, e.g., when you are away on vacation.

Adjust Level

Turn the Subwoofer Level Control **1** up about half way. If no sound emanates from the subwoofer, check the AC-line cord and input cables. Are the connectors on the cables making proper contact? Is the AC plug connected to a "live" receptacle? Has the Power Switch **6** been pressed to the "On" position? Once you have confirmed that the subwoofer is active, proceed by playing a CD or DVD. Use a selection that has ample bass information.

Set the overall volume control of the receiver/processor to a comfortable level. Adjust the Subwoofer Level Control **1** until you obtain a pleasing blend of bass. Bass response should not overpower the room but rather be adjusted so there is a harmonious blend across the entire musical range. Many users have a tendency to set the subwoofer volume too loud, adhering to the belief that a subwoofer is there to produce lots of bass. This is not entirely true. A subwoofer is there to enhance bass, extending the response of the entire system so the bass can be felt as well as heard. However, overall balance must be maintained or the music will not sound natural. An experienced listener will set the volume of the subwoofer so its impact on bass response is always there but never obtrusive.

Crossover Adjustment

The Crossover Frequency Control **4** determines the highest frequency at which the subwoofer reproduces sounds. For the TSS-1100, it is recommended that this control be set at 120Hz (approximately the 3 o'clock position).

NOTE: This control will have no effect if the LFE/Normal Switch **2** is set to LFE. If you have a Dolby Digital or DTS receiver/processor, the Low-Pass Frequency is set by the receiver/processor. Set the LFE/Normal Switch **2** on the subwoofer to LFE. Consult your owner's manual to learn how to view or change this setting. A setting of 120Hz – 150Hz is recommended.

Phase Control

The Phase Switch **3** determines whether the subwoofer speaker's piston-like action moves in and out with the main speakers, 0°, or opposite the main speakers, 180°. Proper phase adjustment depends on several variables such as room size, subwoofer placement and listener position. Adjust the phase switch to maximize bass output at the listening position.

Final Positioning

After correctly connecting the TSS-1100 system and verifying that both the subwoofer and all satellite speakers are playing, it is time to optimize the system for your particular listening room. Earlier, you placed the subwoofer in its general location. Finding the exact location for optimum performance sometimes only involves moving the speakers up to a few inches in any direction. We urge you, therefore, to experiment with placement, if possible, until your speakers deliver their full potential.

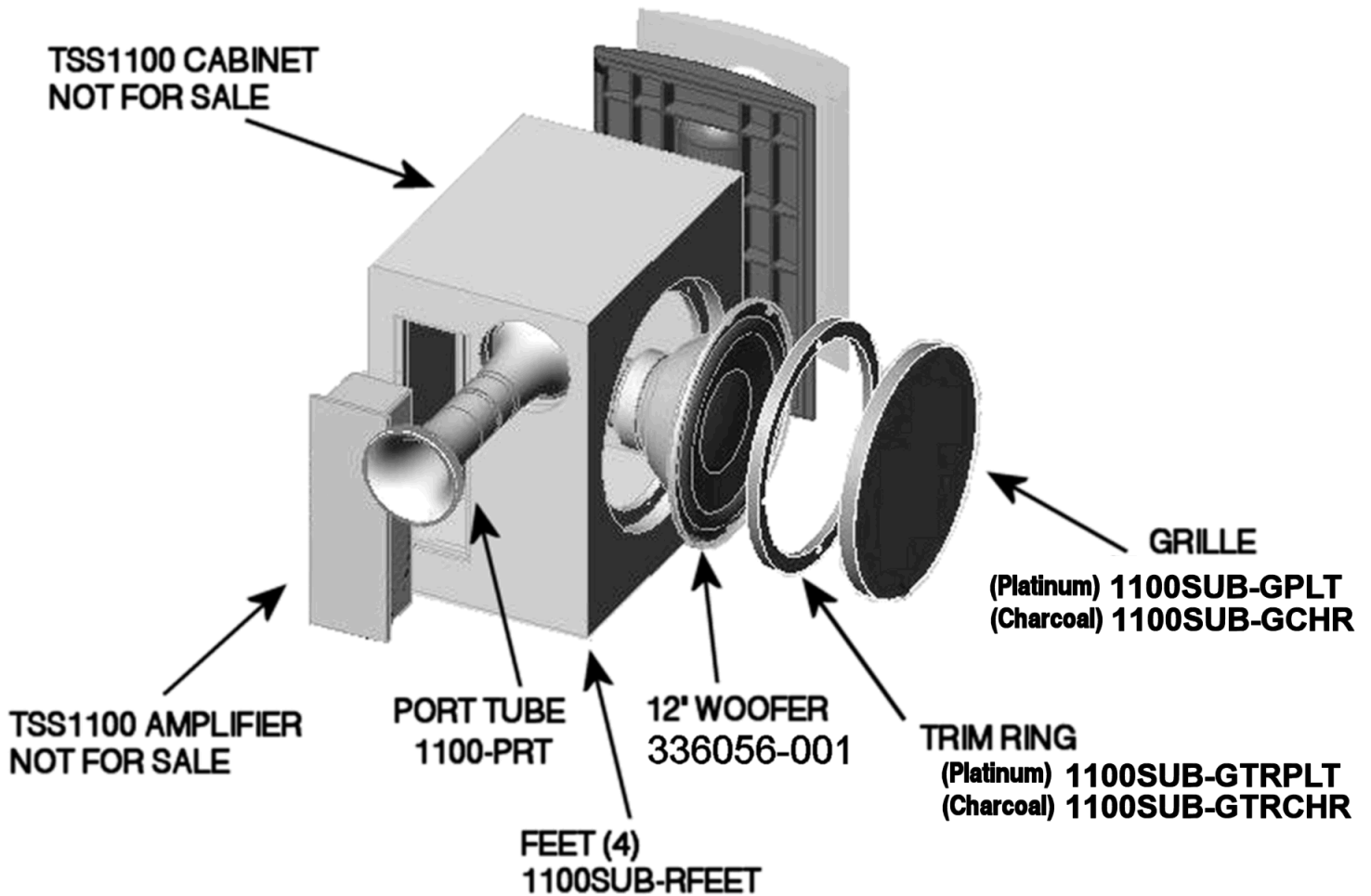
MAINTENANCE AND SERVICE

The satellite and subwoofer enclosures may be cleaned using a soft cloth to remove fingerprints or to wipe off dust.

All wiring connections should be inspected and cleaned or remade periodically. The frequency of maintenance depends on the metals involved in the connections, atmospheric conditions, and other factors, but once per year is the minimum.

If a problem occurs, make sure that all connections are properly made and clean. If a problem exists in one loudspeaker, reverse the connection wires to the left and right system. If the problem remains in the same speaker, then the fault is with the loudspeaker. If the problem appears in the opposite speaker, the cause is in another component or cable. In the event that your TSS-1100 ever needs service, contact your local Infinity dealer or Infinity directly at 516.674.4INF (USA only) or www.infinitysystems.com for a service center near you.

TSS-1100 EXPLODED VIEW



SERVICE NOTE

Access to woofer:

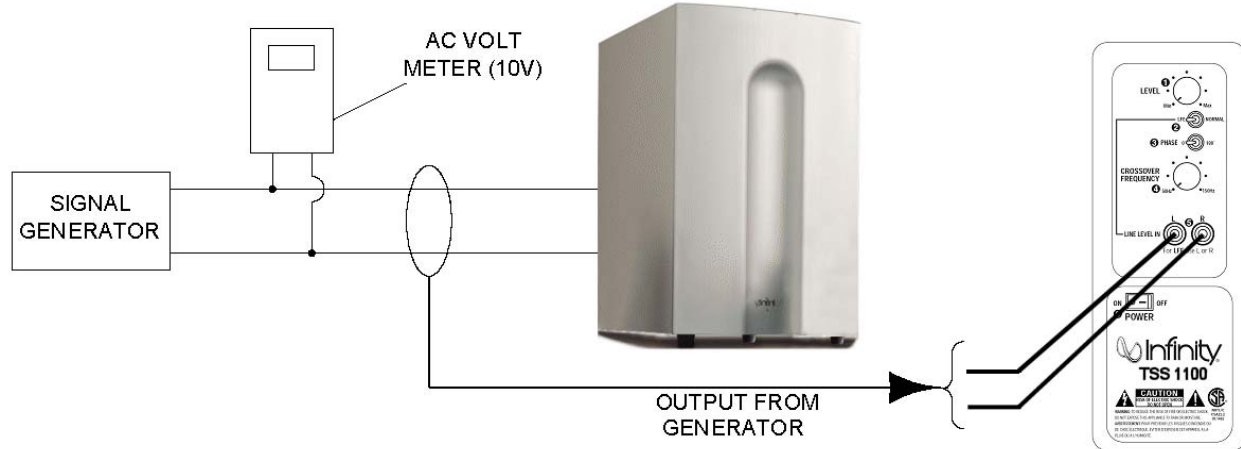
- 1) Carefully pry metal grille out of its recess with a sharp pointed instrument such as an awl or dental pick – USE CAUTION and protect the surface of the subwoofer from scratches or dents from the work tool. Work evenly around the perimeter until the grill w/ gasket can be removed.
- 2) Remove the (6) Phillips screws holding the trim ring to the cabinet.
- 3) Remove the (6) Phillips screws holding the woofer to the cabinet.

REPLACEMENT: Assure when the woofer is replaced, it is exactly centered in the counterbore.

TSS-1100 Satellites/Center & Packing

PART #	DESCRIPTION
TSS-1100 system	
1100-SATBPLT	Complete TSS-1000 Satellite (Platinum)
1100-SATBCHR	Complete TSS-1000 Satellite (Charcoal)
1100-CENBPLT	Complete TSS-1000 Center channel (Platinum)
1100-CENBCHR	Complete TSS-1000 Center channel (Charcoal)
1100-GSPLT	Grill cover w / logo for satellite TSS-1100 platinum
1100-GCPLT	Grill cover w / logo for center TSS-1100 platinum
1100-GSCHR	Grill cover w / logo for satellite TSS-1100 charcoal
1100-GCCHR	Grill cover w / logo for center TSS-1100 charcoal
1100-CRPLT	Cradle for center TSS-1100 platinum
1100-CRCHR	Cradle for center TSS-1100 charcoal
1100CTN-PLT	Carton for TSS-1100 platinum 120V
1100CN-PLT230	Carton for TSS-1100 platinum 230V
1100CTN-CHR	Carton for TSS-1100 charcoal 120V
1100CN-CHR230	Carton for TSS-1100 charcoal 230V
1100SOM-120	120V Owner manual for TSS-1100
1100SOM-230	230V Owner manual for TSS-1100
1100WS-120	TSS-1100 warranty sheet 120V
1100-SCTF1	Top styrofoam sat/center pack
1100-SCBF2	Bottom styrofoam sat/center pack
1100-WFT1	Top styrofoam subwoofer
1100-WFB2	Bottom styrofoam subwoofer
1100-BRTPLT	TSS-1100 wall mount bracket Platinum
TSS-1100 Satellite single pack	
TSS-SAT1100PLT	Complete packed TSS-1000 Satellite (Platinum) w/ accessories
TSS-SAT1100CHR	Complete packed TSS-1000 Satellite (Charcoal) w/ accessories
1100-BRTPLT	TSS-1100 wall mount bracket Platinum
1100-BRTCHR	TSS-1100 wall mount bracket Charcoal
1100CTNSP-PLT	TSS-1100 Sat single pack beauty carton -PLT
1100CTNSP-CHR	TSS-1100 Sat single pack master carton-CHR
1100SATOM	TSS-1100 Sat OM

TSS1100 sub Test Set Up and Procedure



SYSTEM AURAL SWEEP TEST

Equipment needed:

- Function/signal generator/sweep generator
- Multimeter
- RCA cables

General Unit Function (UUT = Unit Under Test)

Switches/knobs on the amplifier faceplate:

Crossover Frequency Adjust full CW (150Hz)

Phase switch – either position

Normal/LFE switch - Normal

1. From the signal generator, Connect both right and left line level inputs (RCA jacks) – to signal generator and UUT. Use Y-cable if necessary from mono source.
2. On the amplifier, turn the LEVEL control full Counterclockwise (Min).
3. Turn on generator, adjust to **150mV, 50 Hz**.
4. Plug in UUT; turn the power switch ON. Turn LEVEL control full Clockwise (Max).
5. LED (on front panel) should now be Green; immediate bass response should be heard and felt from rear port tube opening.

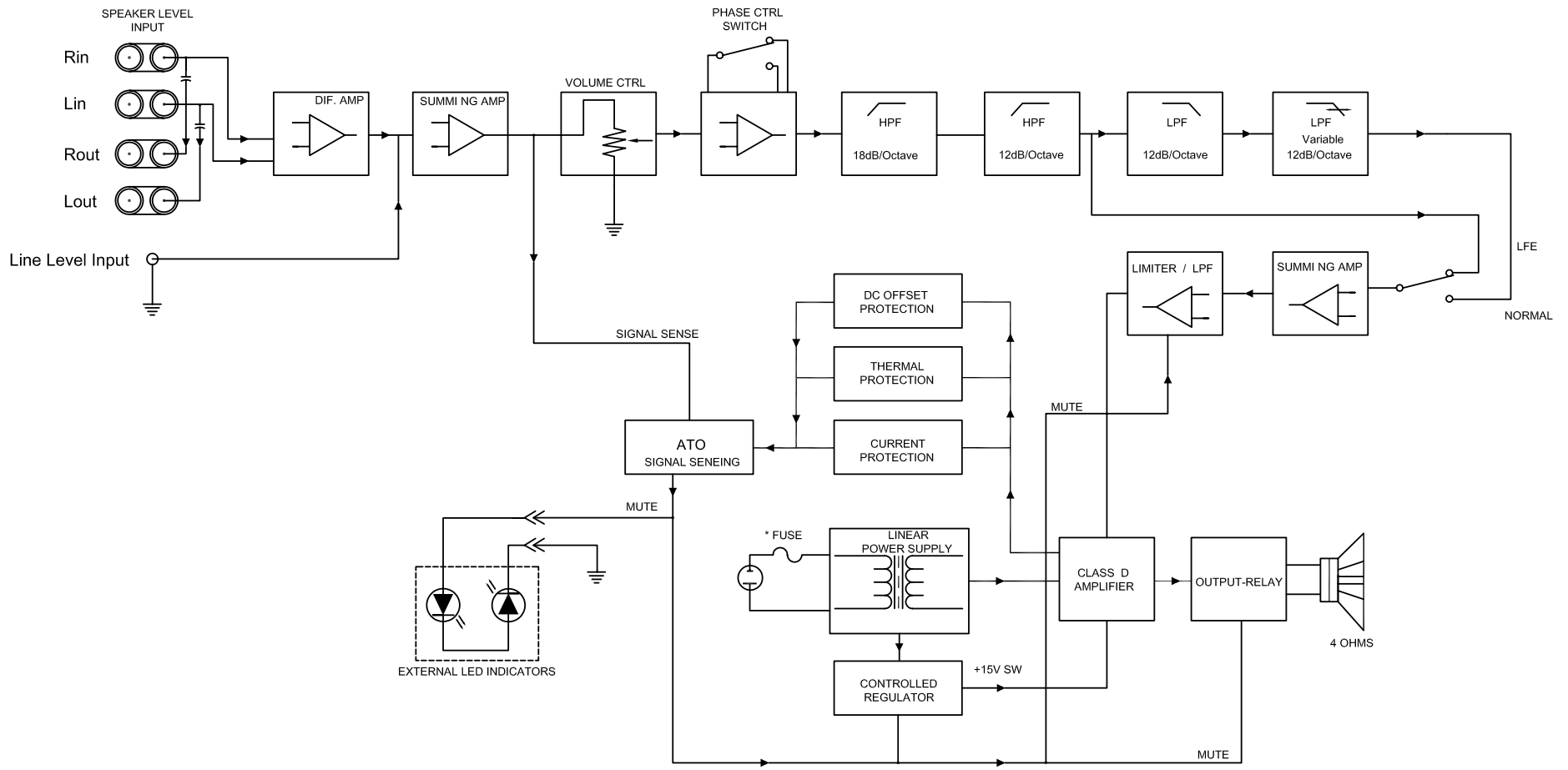
Sweep Function

1. Follow steps 1-5 above, using a sweep generator as a signal source.
2. Sweep generator from 20Hz to 1kHz. Listen to the cabinet and drivers for any rattles, clicks, buzzes or any other noises. If any unusual noises are heard, remove woofer and test.

Driver Function (Woofer)

1. Remove woofer from cabinet (follow steps on exploded view page); detach + and - wire clips.
2. Check DC resistance of woofer; it should be **3.3 ohms \pm 10%**.
3. Connect a pair of speaker cables to driver terminals. Cables should be connected to an integrated amplifier fed by a signal generator. Turn on generator and adjust so that speaker level output is **5.0V**.
4. Sweep generator from 20Hz to 1kHz. Listen to driver for any rubbing, buzzing, or other unusual noises.

TSS-1100

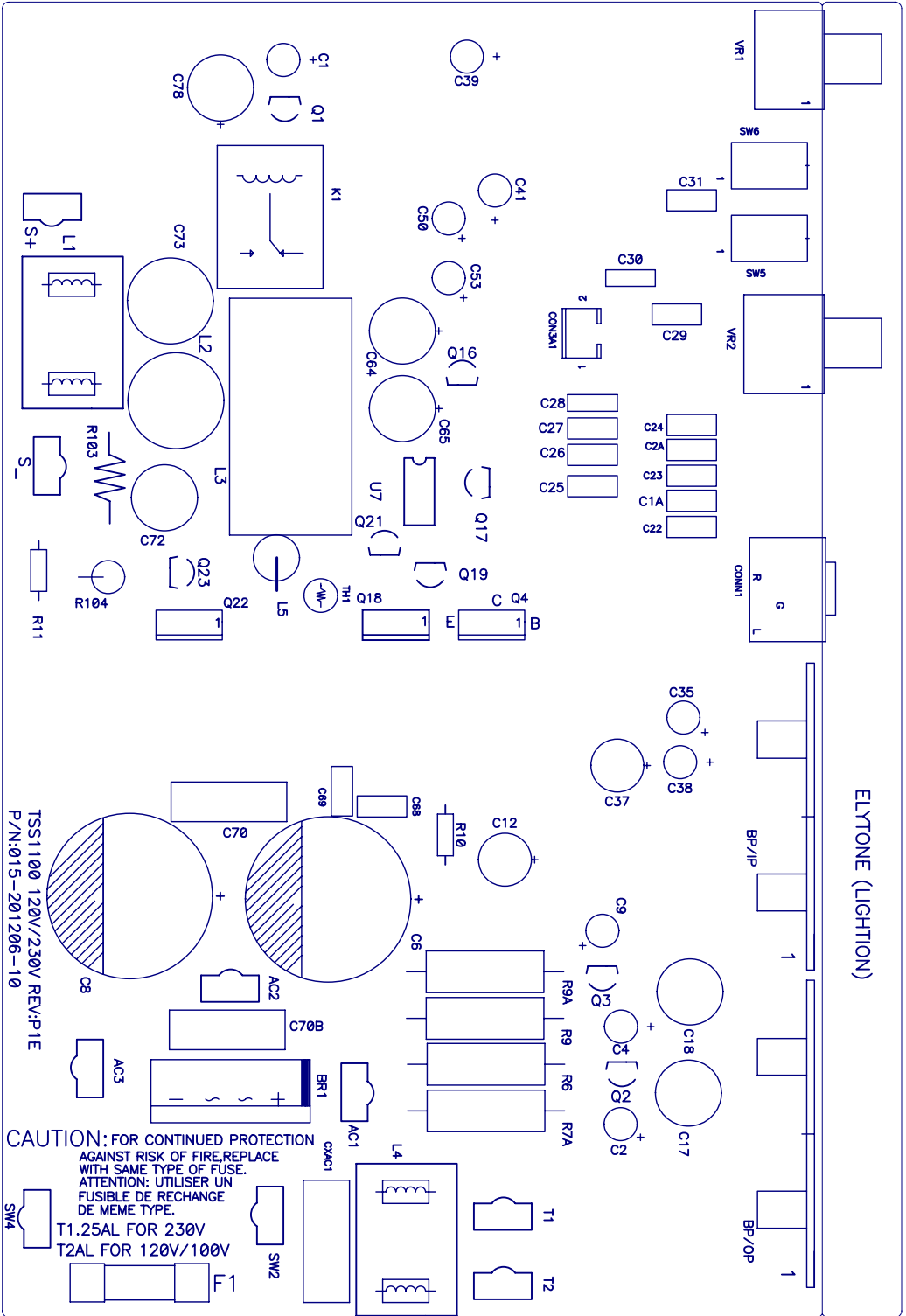


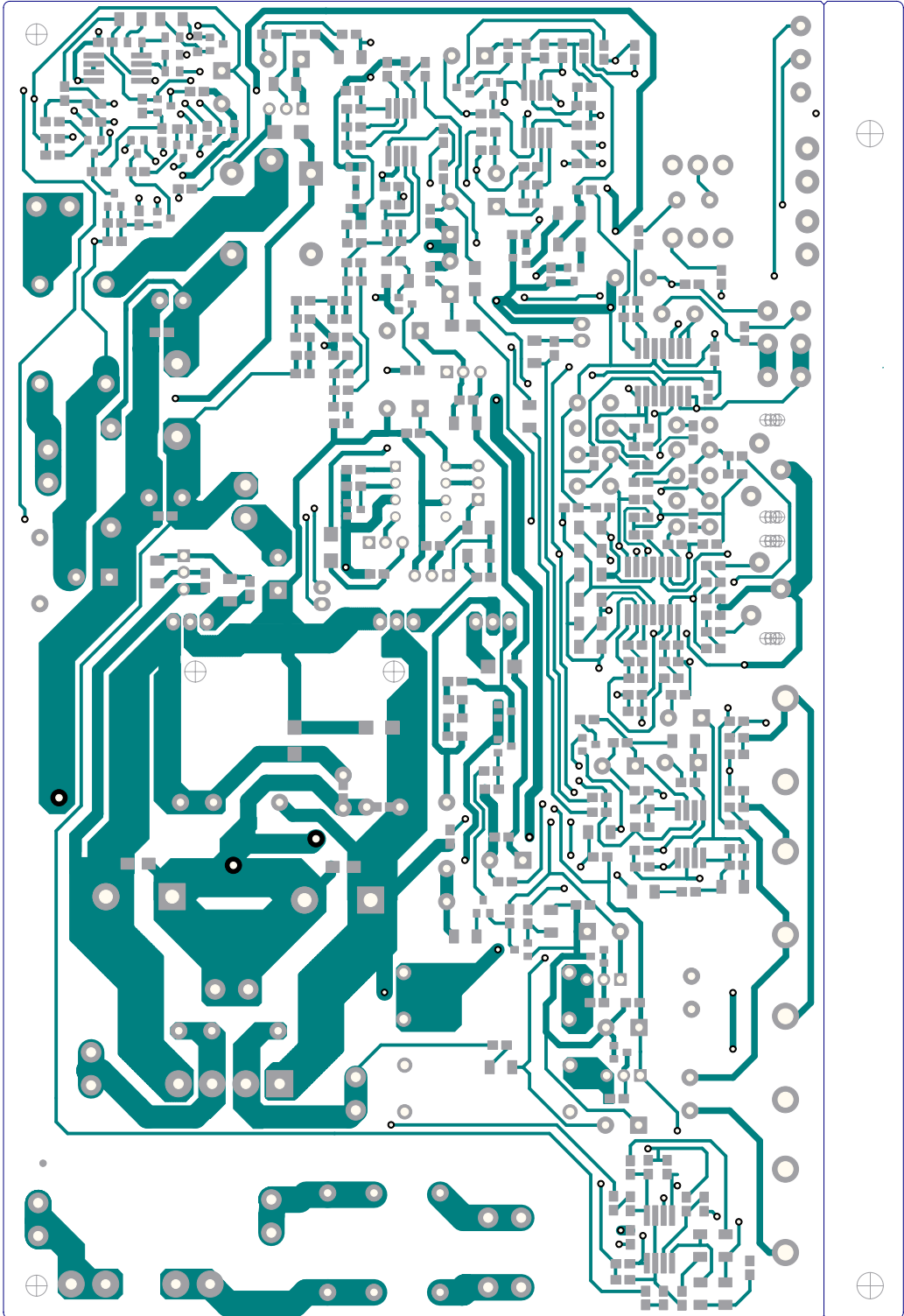
TSS-1100 120V ELECTRICAL PARTS LIST			
Part Number	Qty	Description	Reference Designator
MAIN PCB			
<i>Resistors</i>			
020-000098-400	4	Carbon film resistor 0R 1/8W	C22-C24,31
020-220497-120	1	Carbon film resistor 2K2 1/4W J	R11
021-100401-120	1	MOF Resistor 1K 1W J Kink	R103
021-220202-120	1	MOF Resistor 22R 2W(S) J MB	R10
021-240405-020	4	MOF Resistor 2K4/5WS J 17x6	R6,9,R7A,R9A
022-500003-020	1	Resistor KNP 0R05 3WS J FK TYPE	R104
024-100298-120	2	SMD Resistor 10R 1/8W J 0805	R81,82
024-100398-120	1	SMD Resistor 100R 1/8W J 0805	R62
024-100498-100	1	SMD Resistor 1K 1/8W F 0805	R110
024-100498-120	7	SMD Resistor 1K 1/8W J 0805	R79,83,92,95,96,105,65
024-100598-120	26	SMD Resistor 10K 1/8W J 0805	R2,17,19,37,54,58,63,71,72,74,75,84,88,89,97,106,113-117,111,123,124, 119,120
024-100598-120	3	SMD Resistor 10K 1/8W J 0805	R2-4
024-100698-120	2	SMD Resistor 100K 1/8W J 0805	R3,112
024-100898-120	1	SMD Resistor 10M 1/8W J 0805	R121
024-110498-120	1	SMD Resistor 1K1 1/8W J 0805	R2A
024-110598-100	1	SMD Resistor 11K 1/8W F 0805	R98
024-110698-100	1	SMD Resistor 110K 1/8W F 0805	R4A
024-133598-100	1	SMD Resistor 13K3 1/8W F 0805	R35A
024-137698-100	1	SMD Resistor 137K 1/8W F 0805	R32
024-160398-120	1	SMD Resistor 160R 1/8W J 0805	R6A
024-162598-100	1	SMD Resistor 16K2 1/8W F 0805	R39
024-178498-100	1	SMD Resistor 1K78 1/8W F 0805	R38
024-180598-100	1	SMD Resistor 18K 1/8W F 0805	R29
024-187698-100	1	SMD Resistor 187K 1/8W F 0805	R45
024-200498-120	1	SMD Resistor 2K 1/8W J 0805	R108
024-200598-120	1	SMD Resistor 20K 1/8W J 0805	R94
024-220398-120	1	SMD Resistor 220R 1/8W J 0805	R90
024-220498-121	4	SMD Resistor 2K2 1/8W J 0805	R1,87,61,68
024-220598-120	1	SMD Resistor 22K 1/8W J 0805	R118
024-220798-120	1	SMD Resistor 2M2 1/8W J 0805	R80
024-237598-120	1	SMD Resistor 23K7 1/8W F 0805	R48
024-270498-120	2	SMD Resistor 2K7 1/8W J 0805	R73,64
024-280498-100	2	SMD Resistor 2K8 1/8W F 0805	R51,53
024-300398-120	1	SMD Resistor 300R 1/8W J 0805	R55
024-300598-120	1	SMD Resistor 30K 1/8W J 0805	R56
024-330498-120	8	SMD Resistor 3K3 1/8W J 0805	R7,8,12-15,59,67
024-330598-120	2	SMD Resistor 33K 1/8W J 0805	R4,5
024-332498-100	2	SMD Resistor 3K32 1/8W F 0805	R26,27
024-390498-120	1	SMD Resistor 3K9 1/8W J 0805	R93
024-390598-120	1	SMD Resistor 39K 1/8W J 0805	R77
024-430498-120	1	SMD Resistor 4K3 1/8W J 0805	R78
024-453498-100	1	SMD Resistor 4K53 1/8W F 0805	R36
024-453598-100	1	SMD Resistor 45K3 1/8W F 0805	R30
024-470298-120	2	SMD Resistor 47R 1/8W J 0805	R101,102
024-470398-120	3	SMD Resistor 470R 1/8W J 0805	R76,99,100
024-470498-120	2	SMD Resistor 4K7 1/8W J 0805	R85,86
024-470598-120	4	SMD Resistor 47K 1/8W J 0805	R44,47,49,107
024-470698-120	1	SMD Resistor 470K 1/8W J 0805	R70
024-470798-120	1	SMD Resistor 4M7 1/8W J 0805	R60
024-510398-120	1	SMD Resistor 510R 1/8W J 0805	R57
024-560498-120	1	SMD Resistor 5K6 1/8W J 0805	R1
024-560598-120	1	SMD Resistor 56K 1/8W J 0805	R122
024-620398-100	2	SMD Resistor 620R 1/8W F 0805	R16,18
024-680398-120	1	SMD Resistor 680R 1/8W J 0805	R5A
024-680498-120	6	SMD Resistor 6K8 1/8W J 0805	R46,91,40-43
024-680598-120	6	SMD Resistor 68K 1/8W J 0805	R33,34A,31,50,52,66
024-820598-120	1	SMD Resistor 82K 1/8W J 0805	R69
025-010300-000	1	Thermister TSE-103 K L:50mm	TH1

MAIN PCB			
026-200595-269	1	VR PN:RD163121R03D-20KBx2(EJ) FREQUENCY	VR2
026-500495-252	1	VR 5KA PN:RK163111R52B-5KA (EJ) LEVEL	VR1
<i>Capacitors</i>			
031-100144-103A	1	SMD Capacitor 0u001/50V K 0805 X7R TAP	C79
031-100184-100A	2	SMD Capacitor 0u01/250V K 0805 X7R TAP	C3,7
031-100244-100A	7	SMD Ceramic capacitor 0u01/50V K 0805 X7R	66,67,5,10,33,45,51,
031-100343-100A	2	SMD Capacitor 100pF/50V J 0805 NPO TAP	C36,58)
031-100344-100	4	SMD Capacitor 0u1/50V K 0805 X7R TAPIN	C1-4
031-100344-100A	16	SMD Capacitor 0u1/50V K 0805 X7R TAPIN	C11,42-44,46-49,52,54,55,60,63,71,74,77
031-220243-103	1	SMD Capacitor (PHYCOMP) 0u022/50V J 080	C40
031-220344-300A	3	SMD Capacitor 220pF/50V K 0805 NPO TAP	C20,21,19
031-330444-300	1	SMD Capacitor 3300pF/50V K 0805 X7R TA	C34
031-470244-102A	2	SMD Capacitor 0u047/50V K 0805 X7R TAP	C62,59
031-470344-100A	1	SMD Capacitor 470pF/50V K 0805 X7R TAP	C80
031-560243-100A	2	SMD Capacitor 56pF/50V J 0805 NPO TAPI	C57,61
031-820343-101A	1	SMD Capacitor 820pF/50V J 0805 NPO TAP	C56
032-100484-200	2	END Mylar capacitor 1uF/250V K P:15	C70,C70B
032-270393-300	1	Mylar capacitor (ESK) 0u27/63V J (R) P:5	C29
032-820244-200	1	Mylar capacitor 0u082/100V K (R)	C30
033-470464-270	1	NPE Capacitor 1K 4u7/100V K1	C73
033-680464-270	1	NPE Capacitor 6u8/100V K10	C72
034-100525-300	1	Electrolytic capacitor 10uF/25V M (R)0511 P:5	C35
034-100625-300	1	Electrolytic capacitor 100uF/25V M (R)6	C64
034-220525-301	5	Electrolytic capacitor 22uF/25V M (R)5x11 P:5	C4,9,41,50,53
034-330515-000	1	Electrolytic capacitor 33uF/16V M (R)0511 P:5	C39
034-330525-300	1	Electrolytic capacitor 33uF/25V M (R)05	C1
034-330615-300	2	Electrolytic capacitor 330uF/16V M (R)0812 P:5	C12,78
034-330780-300	2	Electrolytic capacitor 85 SNAPIN 3300uF/80V	C6,8
034-470415-301	1	Electrolytic capacitor 4u7/50V M (R)0511 P:5 T	C2
034-470515-200	1	Electrolytic capacitor 47uF/16V M (R)0511 P:2	C37
034-470615-301	1	Electrolytic capacitor 470uF/16V M (R)0812 P:5	C65
035-100393-301	2	Mylar capacitor (ESK TYPE) 0u1/63	C28,2A
035-100443-300	2	Mylar capacitor (ESK TYPE) 1uF/63	C25,26
035-220393-300	1	PE Capacitor 0u22/63V J P:5	C27
035-470293-300	1	PE Capacitor 0u047/63V J P:5	C1A
038-100363-300	2	MPE capacitor P:5 0u1/100V J	C68,69
039-100384-100	1	Safety capacitor (0u1/250V) PN:HXQ0.1K27	CXAC1
<i>Semiconductors</i>			
051-000600-100	2	Transistor NPN PN:MPSW06RLRA TO-92 T	Q2,Q16
051-003100-000	1	Transistor NPN PN:TIP 31C TO-220 (MO	Q4
051-005600-100	1	Transistor PNP PN:MPSW56RLRA TO-92 T	Q3
051-222200-100	1	Transistor NPN (ON SEM) PN:MPS2222AR	Q21
051-290700-100	2	Transistor PNP (ON) PN:MPS2907A RLRA	Q19,23
051-540101-000	1	Transistor PNP(FAIRCHILD PN:2N5401 T	Q1
051-555100-000	1	Transistor NPN PN:2N5551 TO-92 TAPIN	Q17
051-640001-000	2	MOSFET N-Channel PN:IRF640N TO-2	Q18,22
052-400080-000	1	Bridge Rectifier PN:RS804 400V,8A	BR1
053-211100-000	1	IC, IR2111 HALF-BRIDGE DRIVER	U7
054-000100-100	5	SMD DIODE PN:ES1D 200V 1A	D5,26,29,33,38
054-001002-100	1	SMD ZENER DIODE PN:BZX84C10 10V	D35
054-001501-100	3	SMD ZENER DIODE PN:BZX84C15 15V	D6,7,9
054-007200-100	2	SMD IC PN:TL072CDR SO-8 DUAL OP-AMP	U1,5,6
054-007400-100	2	SMD IC PN:TL074CDR QUAD OP-AMP	U2,3
054-008403-100	1	SMD ZENER DIODE BZX84C3V0 SOT-23	D25
054-011400-100	1	SMD Transistor PN:DTC114TKA SMT3 TAP	Q7
054-033904-100	7	SMD Transistor PN:MMBT3904LT1 SOT23	Q11,14,13,5,8,25,9
054-033906-100	4	SMD Transistor PN:MMBT3906LT1 SOT23	Q6,10,12,15
054-045580-100	1	SMD IC NJM4558M-TE3 DUAL OP-AMP	U4
054-050601-100	2	SMD ZENER DIODE PN:BZX84C5V6 5.6	D36,37
054-390402-100	1	SMD Transistor (SC00044) PN:MMBT3904TR	Q1
054-414803-100	21	SMD DIODE PN:LL4148	D1-4,8,27,30,31,34,39, 11,14,16,17, 20-22,18,19,28,32
054-414803-100	2	SMD DIODE PN:LL4148	D1,2

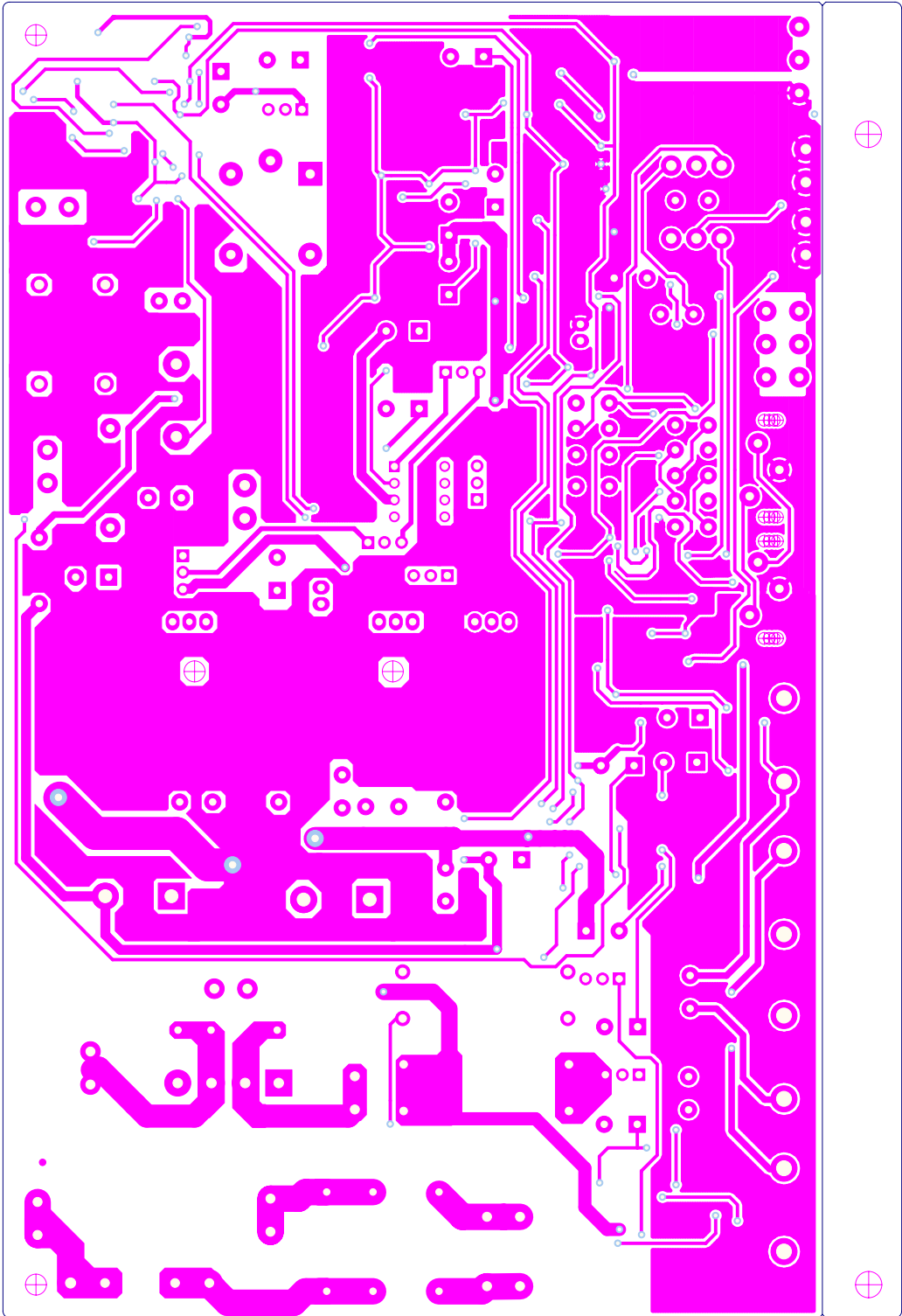
MAIN PCB			
054-540100-100	3	SMD Transistor (PNP) PN:MMBT5401 LT1	Q20,24,26
THERMAL SENSE PCB			
024-100598-120	3	SMD Resistor 10K 1/8W J 0805	R138-R141
024-560498-120	1	SMD Resistor 5K6 1/8W J 0805	R140
031-100344-100	4	0U1/50V K 0805 X7R	C81-82, C13,C38
054-007200-100	1	SMD IC TL072CDR SO-8	U8
054-390402-100	1	SMD Transistor MMBT3904TR Fairchild	Q27
054-414803-100	2	SMD Diode LL4148 Vishay	D44-45
Miscellaneous			
1100-LED	1	LED ass'y	
042-010147-000	1	Transformer PN:YT-15250 (TSS1100/120V	
043-300101-000	1	INDUCTOR PN:YT-10033 30uH	L2
043-324300-000	1	INDUCTOR 324uH YT-10778	L4
043-560200-000	1	INDUCTOR 56uH YT-10779	L1
043-840100-000	1	Inductor PN:YT-14389 84uH TSS1100/23	L3
044-100100-000	2	SMD FERRITE BEAD PN:321611 600R/	FB1,FB2
061-020000-000	2	Knob ABS HTS-10/20 ϕ 20x15m/m UL	94V-0 BLK
061-314002-000	2	Strain Relief P/N SB4F-2	
061-400014-000	4	RUBBER FOOT ID:6.2 OD:11.5 t=2mm	55degree BLK
061-700044-000	3	Mica 13x18mm TO-220 holeless	Q4,18,22
063-010012-000	4	Bracket for power transistor P/N:TRK-1	for ICx4
063-321102-000	1	PANEL (ARMANDO) 322x105.7x15mm A	BS-94VO BLK
063-531808-000	1	Bucket (PB-10/12) ABS 322x105.7x14	6.5mm BLK (94VO)
066-120300-900	5	CABLE TIE CV-120S	
072-010007-000	1	RCA base SCJ-1020 2P(G) WHT,RED	CONN1
073-011001-400	2	BRACKET 16x34mm t=0.8mm brass plated	for PANEL
073-032315-601	1	Heatsink, black anodized 70x58x20mm, thread	
073-050001-000	2	FUSE CLIP P/N:CFFH1206	
074-020018-000	1	ROCKER SW (POWER) PN:RF1003-BB4-0	
074-030002-000	2	TOGGLE SW PN:L101-T2B4QE	SW5,SW6
074-300018-000	1	RELAY PN:943-1C-48D	K1
083-041802-009	1	UL Power Cord SPT-2 BLK 6 feet	
093-105202-300	1	FUSE:UL GSL(2AG) FUSE:2A,250V,5*	F1
008-061215-000	1	GASKET C4305 12x15 t=5mm CR PSA	for Thermister
008-062002-002	1	GASKET (PB10/12) PN:L-32 200x20m	
008-062002-012	1	GASKET (PB10/12) 200x20mm t=2mm CR4305 PSA	for Cover
008-062004-012	1	GASKET 200x35x3mm PSA	for spkr cable
008-063208-000	6	GASKET C4305 321x8 t=1mm CR PSA	for Cover
008-069304-000	6	GASKET C4305 93x4 t=1mm CR {SA	for Cover
041-115001-000	1	BEAD COIL YT-10911	L5
230V VARIATION			
086-021818-030	1	VDE Power Cord LF2-75	
093-205201-320	1	Fuse 1.25A/250V VBS UTE	F1
042-010148-000	1	Power Transformer	PT1
072-060170-000	4	Binding Post	
072-060213-000	4	Binding Post Plug (Black)	
072-060214-000	4	Binding Post Plug (Red)	

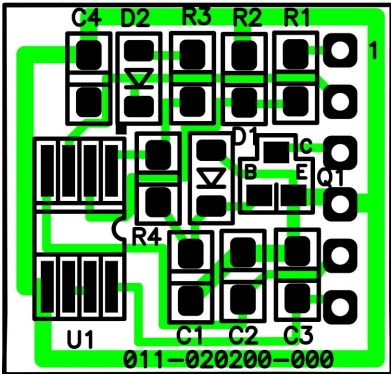
COMPONENT SIDE





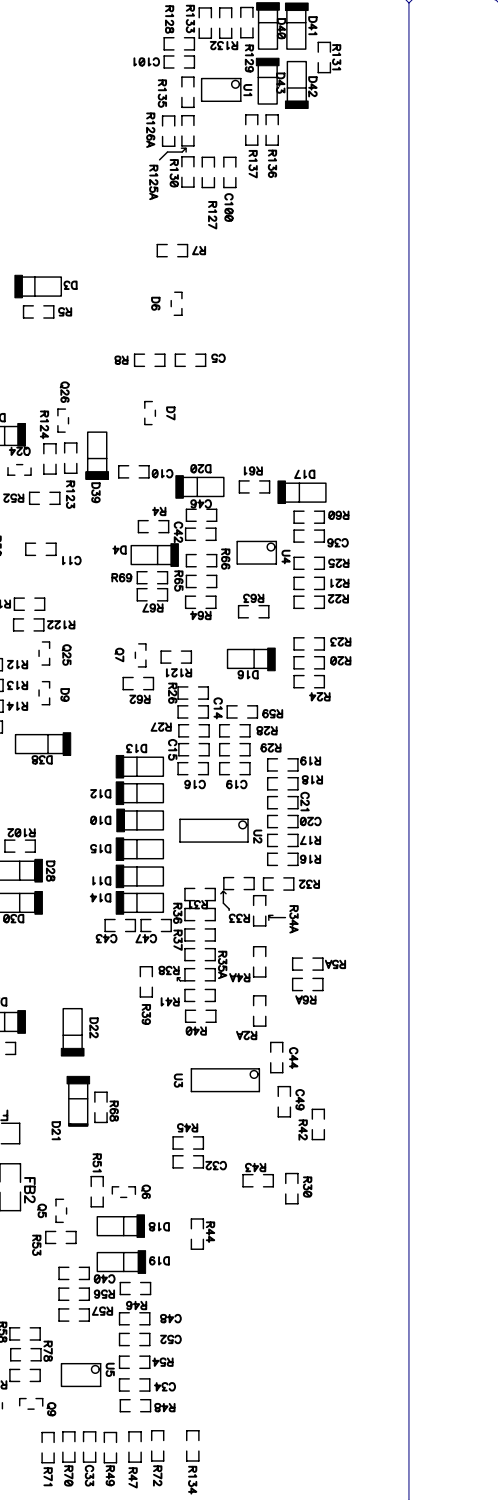
PB10/PB12 ENTRÀ II COMPONENT SIDE





THERMAL SENSE PCB

3.0V REF
 THERM
 OUT
 GND
 -15V
 +15V

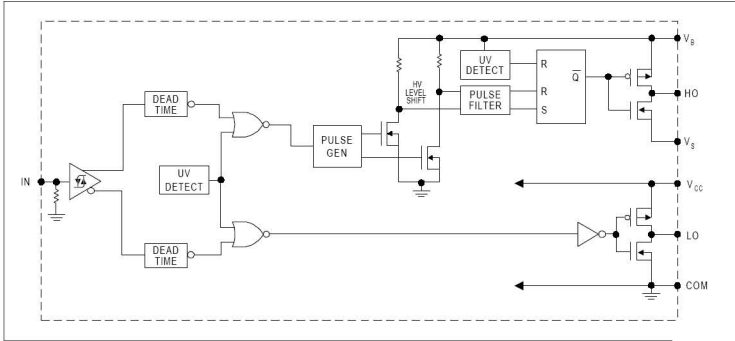


011-020200-000

Integrated Circuit Diagrams

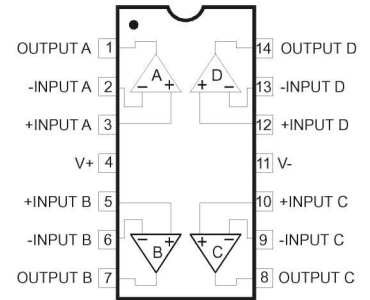
IR2111 HALF BRIDGE DRIVER

Functional Block Diagram

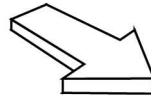
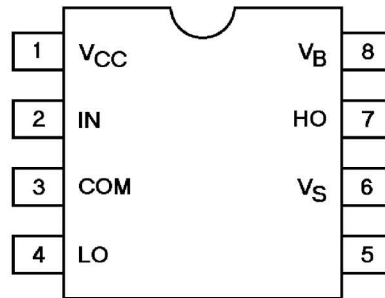


OPAMP, QUAD 14P TL074

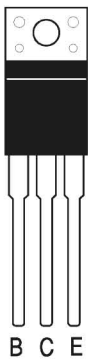
U2,3



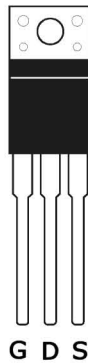
IR2111 U7



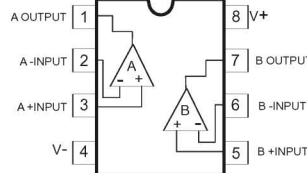
TRANS, NPN T0220
TIP31C Q4



MOSFET,
IRF640 T0220
Q18,22

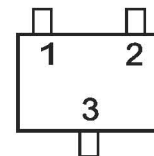


OPAMP, DUAL 8PIN
TL072, NJM4558M
U1, 4-6



- * MMBT3904LTI SOT23,
- * MMBT3906LTI SOT23,
- * DTC114TK SMT3
- * MMBT5401 LTI

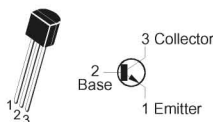
Q1,5-15,20,24-27



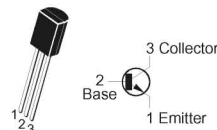
- 1) Emitter
- 2) Base
- 3) Collector

* PREFIX MAY BE "FMMT"

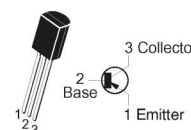
TRANS NPN
MPS2222A, 2N5551
Q17,21



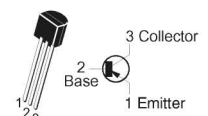
TRANS NPN
MPSW06
Q2,16

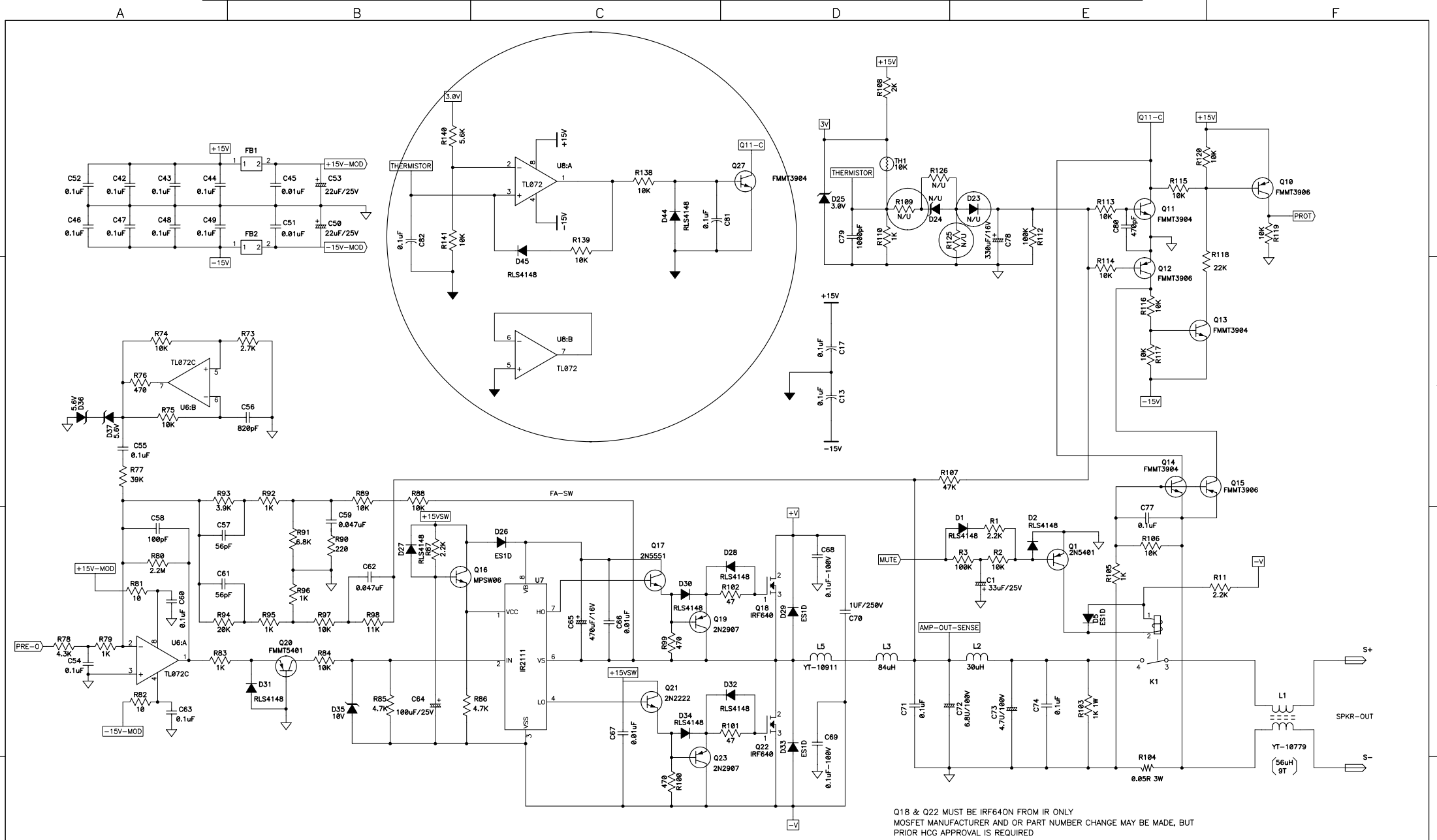


TRANS PNP
MPSW56,
Q3



TRANS PNP
MPS2709A, 2N5401
Q1,19,23

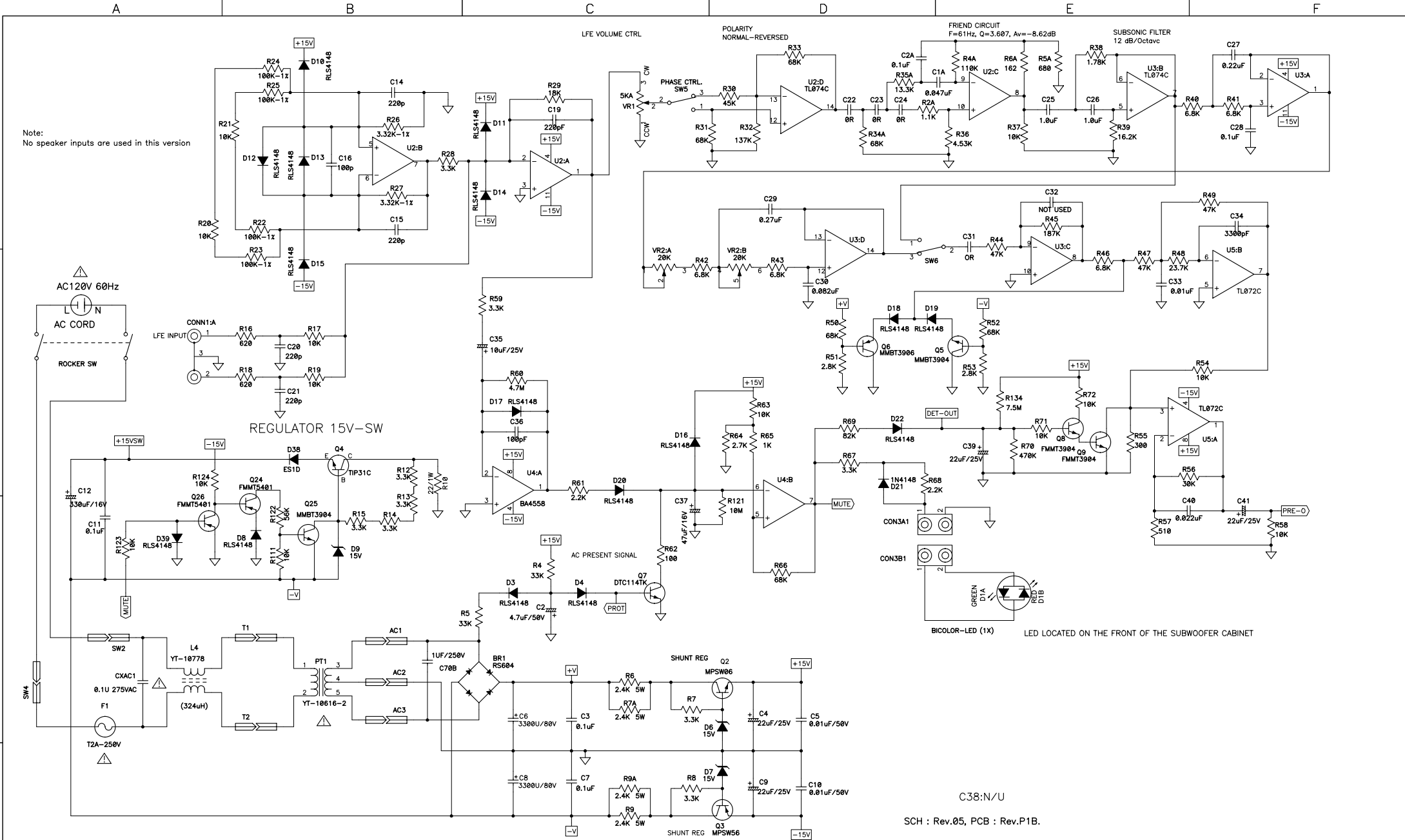




Q18 & Q22 MUST BE IRF640N FROM IR ONLY
 MOSFET MANUFACTURER AND OR PART NUMBER CHANGE MAY BE MADE, BUT
 PRIOR HCC APPROVAL IS REQUIRED

SCH : Rev.05, PCB : Rev.P1B.

Rev:	Notes:	Date:	Rev:	Notes:	Draw by	Designed by	Checked by	Approved By	INFINITY
P1A	SUB DESIGN ORIGINATED FROM PB12 & PS-12	2003/06/30	04	Add:Temp-Protection					ET-01-21-4788
P1B	ADD: C79,80 R125,126	2003/07/22	05	Del : D23,40, R125,127					Model no: TSS-1100 (120V) Version
P1C	Modify PT1	2003/11/14	06	Modify Temp-Protection Ref des					Sch name: POWER AMP PCB
P1D	Modify C56,D28,32	2003/12/19							Issue no: ET-01-21-4788
01	Mass Production REV.01 = P1D	2004/1/9							Date: 2004/09/13
02	Modify C78	2004/1/28							Sheet: 13 Rev: 06
03	Add : D40, R127	2004/3/26							Size: A2 Author: VITA

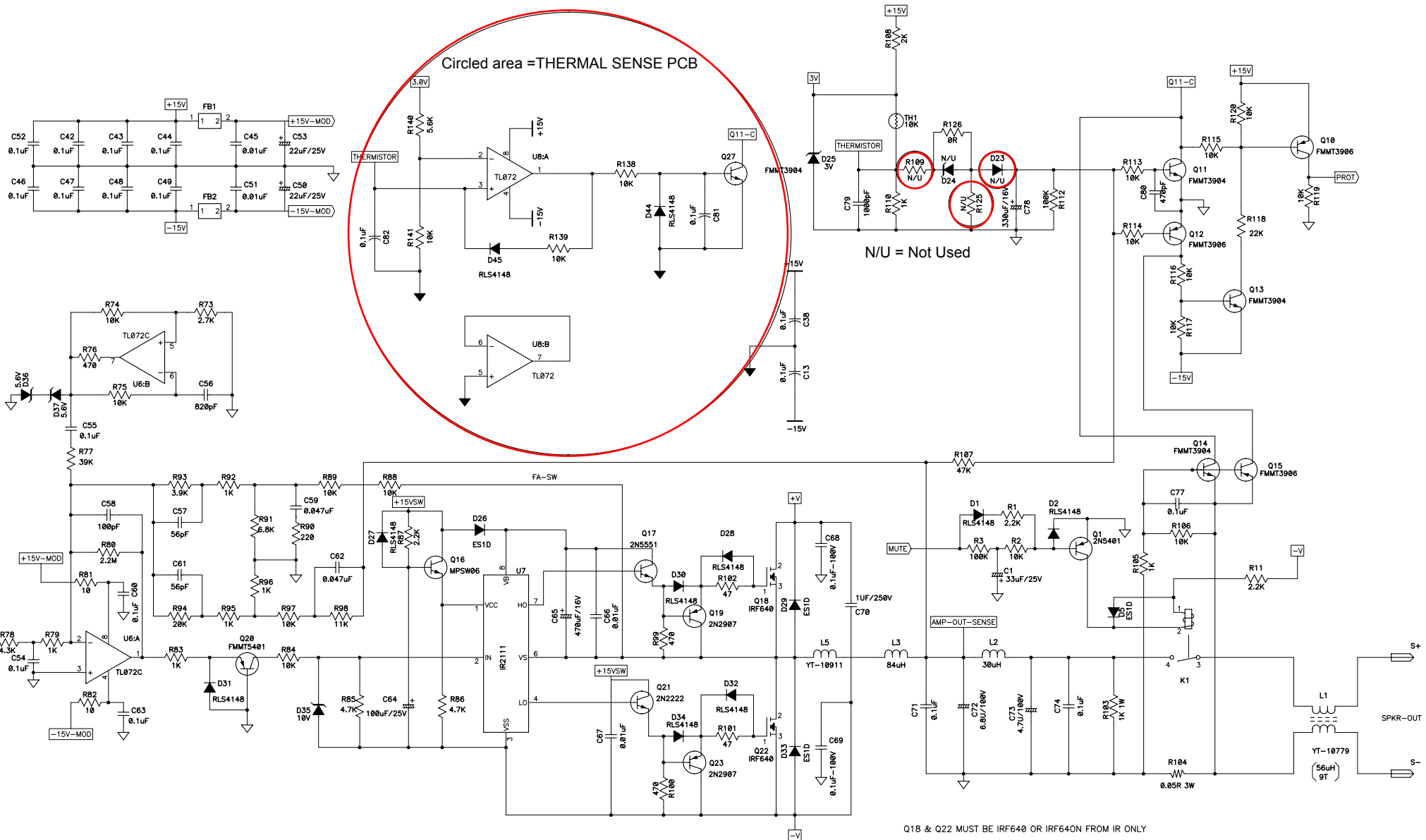


C38:N/U

SCH : Rev.05, PCB : Rev.P1B.

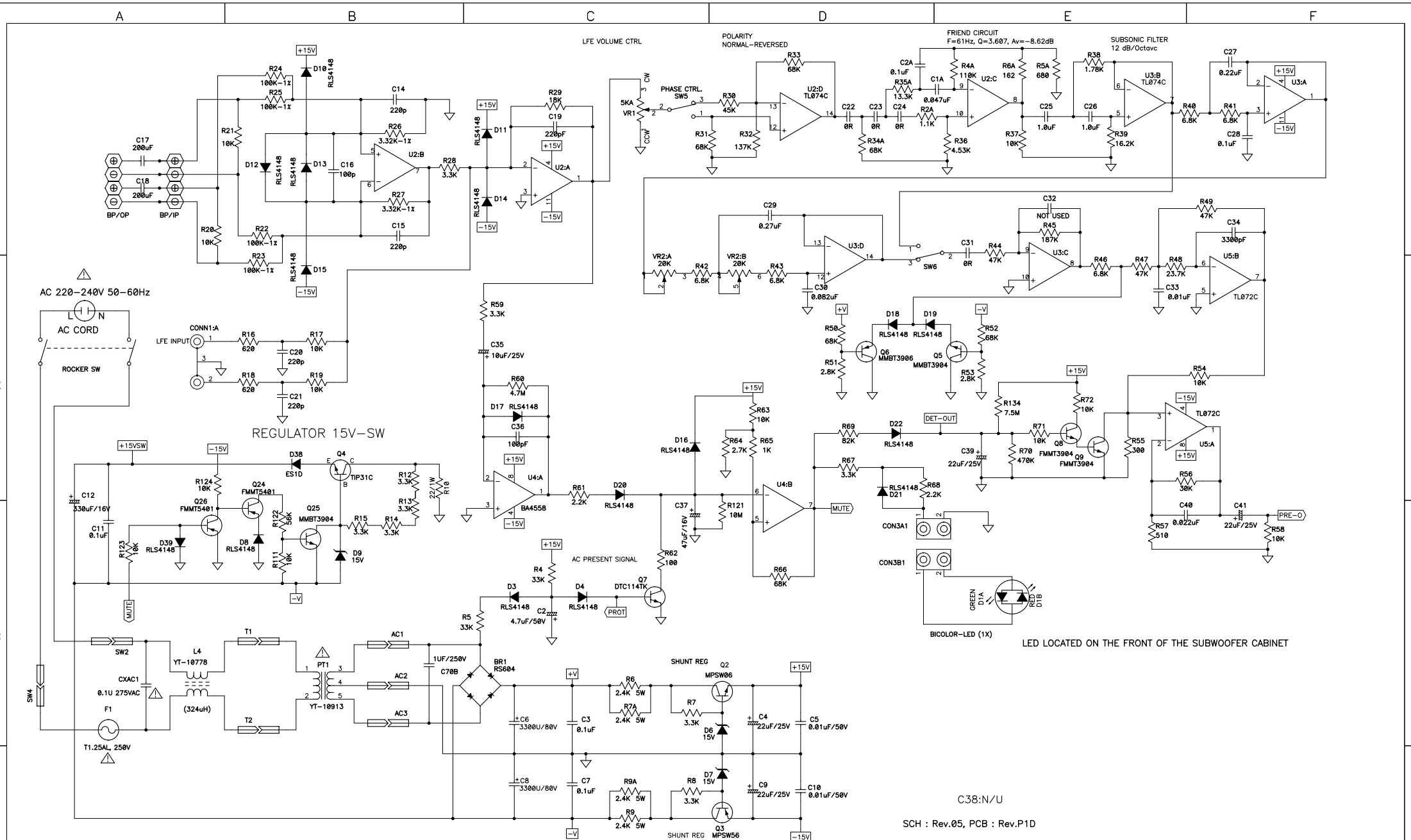
Rev:	Notes:	Date:	Rev:	Notes:	Draw by	Designed by	Checked by	Approved By	INFINITY
P1A	SUB DESIGN ORIGINATED FROM PB12 & PS-12	2003/06/30	04	Add:Temp-Protection					: 416-0381101
P1E	ADD: C79,80 R125,126	2003/07/22	05	Del : D23,40, R125,127					Model no: TSS-1100 (120V) Version
P1C	Modify PT1	2003/11/14							Sch name: PRE AMP PCB
P1D	Modify C56,D28,32	2003/12/19							Issue no: ET-01-21-4788
01	Mass Production REV.01 = P1D	2004/1/9							Date: 2004/09/13
02	Modify C78	2004/1/28							Sheet: 12 Rev: 06
03	Add : D40, R127	2004/3/26							Size: A2 Author: VITA

A B C D E F



SCH : Rev05, PCB : Rev.P1D

Rev:	Notes:	Date:	Rev:	Notes:	Draw by	Designed by	Checked by	Approved By	INFINITY
P1A	SUB DESIGN CREATED FROM PB-12 AND PS-12 AMPS	2003/09/19							:
P1B	Modify C56, D28,32, L3	2003/12/19							Model no: TSS1100 (230V) Version
01	Mass Production REV.01 = P1B	2004/1/28							Sch name: POWER AMP PCB
02	Add : D40, R127	2004/3/26							Issue no:
03	Add:Temp-Protection	2004/04/16							Date: 2004/08/30
04	Del : D23,40, R125,127	2004/06/09							Sheet: 13-2 Rev: 05
05		2004-08-30							Size: A2 Author: VITA



C38:N/U
SCH : Rev.05, PCB : Rev.P1D

Rev:	Notes:	Date:	Rev:	Notes:	Draw by	Designed by	Checked by	Approved By	INFINITY
P1A	SUB DESIGN CREATED FROM PB-12 AND PS-12 AMPS	2003/09/19							
P1B	Modify C56, D28,32, L3	2003/12/19							
01	Mass Production REV.01 = P1B	2004/1/28							Model no: TSS1100 (230V) Version
02	Add : D40, R127	2004/3/26							Sch name: PRE AMP PCB
03	Add:Temp-Protection	2004/04/16							Issue no:
04	Del : D23,40, R125,127	2004/06/09							Date: 2004/08/30
									Sheet: 13-1 Rev: 05

PACKAGING

