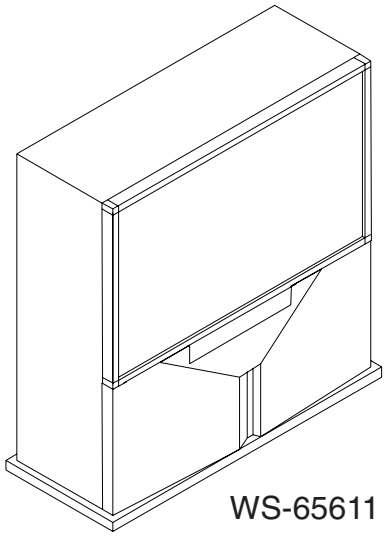
2002

MITSUBISHI ELECTRIC

Service Manual

PROJECTION TELEVISION
V21 / V21+ / V21++ CHASSIS



WS-65611

V21 MODELS	V21+ MODELS	V21++ MODELS
WS-48511	WS-65611	WS-55711
WS-55511		WS-65711
WS-65511		WS-65712
WS-B55		WS-73711

CAUTION:
Before servicing this chassis, it is important that the service person read the "SAFETY PRECAUTIONS" and "PRODUCT SAFETY NOTICE" contained in Part 1 of this manual.

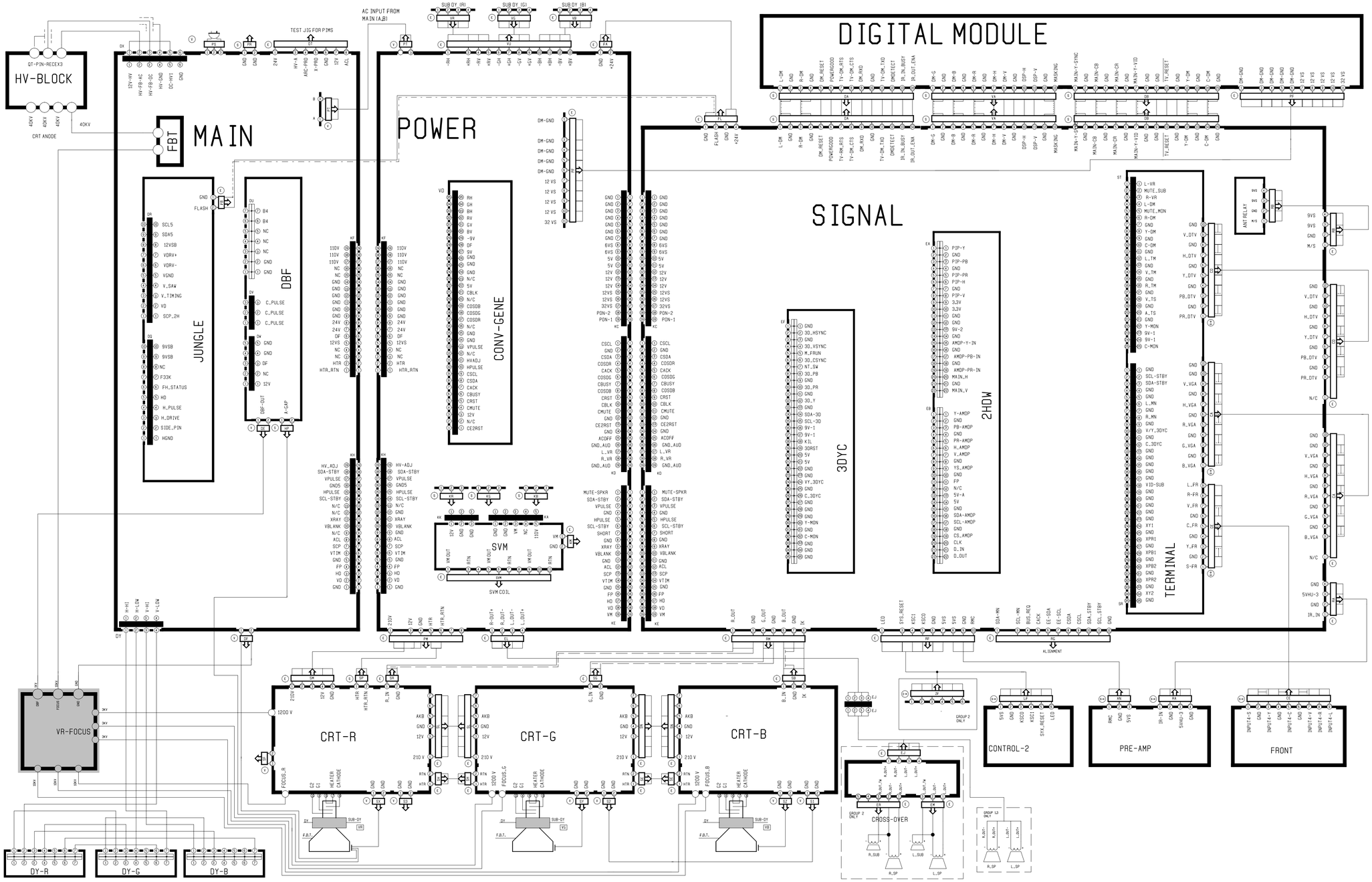
PART 2
SCHEMATIC DIAGRAMS

CONTENTS **Page**

Refer to PART 1 for:

- Specifications
- Safety Precautions
- Disassembly
- CRT Replacement
- Electrical Adjustments
- Parts List
- Block Diagrams

MITSUBISHI DIGITAL ELECTRONICS AMERICA, INC.
9351 Jeronimo Road, Irvine, CA 92618-1904



NOTES

1. DC voltages were measured from points indicated to the circuit ground with a high-Z voltmeter.
2. Waveforms were taken with standard color bar signal
3. TP13, etc. show Test Points
4. CAPACITORS

Value	Not indicated	[PF, for numbers more than 1 μF, for numbers less than 1]	
Dielectric Strength	Not indicated : 50V		
Tolerance	Not indicated = ±10% [No tolerance is indicated for electrolytic capacitors and ±20%]		
	G = ±2%	P = +100%	Q = +30%	C = ±0.25PF
	J = ±5%		-0%	-10%	D = ±0.5PF
	K = ±10%	Z = +80%	T = +200%	F = ±1PF
	M = ±20%	-20%	-0%	G = ±2PF
Type I Parts except for chips	Not indicated : Ceramic capacitor			
	MF : Polyester capacitor			
	PP : Polypropylene film capacitor			
	ALM : Aluminus electrolytic capacitor			
	TF : Twin film capacitor			
	SC : Semiconductor Ceramic capacitor			
	MP : Metalized paper			
	MPF : Metalized plastic film capacitor			
	MMF : Metalized polyester capacitor			
	MF2P : Polyester polypropylene film capacitor			
	PS : Styrol capacitor			
	TAN or ANT : Tantalum capacitor			
	: Electrolytic capacitor			
	NP : Non polarized electrolytic capacitor			
Type II Chips	Not indicated : Ceramic capacitor chip			
	: Electrolytic capacitor			
	NP : Non polarized electrolytic capacitor chip			
Characteristic (only ceramic capacitor)	Not indicated : F or B (high dielectric percentage) CH, SL, etc. : Temperature compensating types			

5. RESISTORS

Value	Not indicated = Ohm K = 1,000 Ohm M = 1,000,000 Ohm	
Wattage	Parts except for chips	Not indicated = 1/4W or 1/8W
	Chips	Not indicated = 1/8W
Tolerance	Not indicated = ±5% D = ±0.5% J = ±5% F = ±1% K = ±10%	
Type I Parts except for chips	Not indicated : Carbon resistor	
	S : Fixed composition resistor	
	MG : Metal oxide film resistor (type B)	
	CE : Cemented resistor	
	W : Wire wound resistor	
	R : Metal film resistor	
	MFC : Metal plate cement resistor	
	ML : Metal liner resistor	
Type II Chip	Not indicated : Chip resistor	

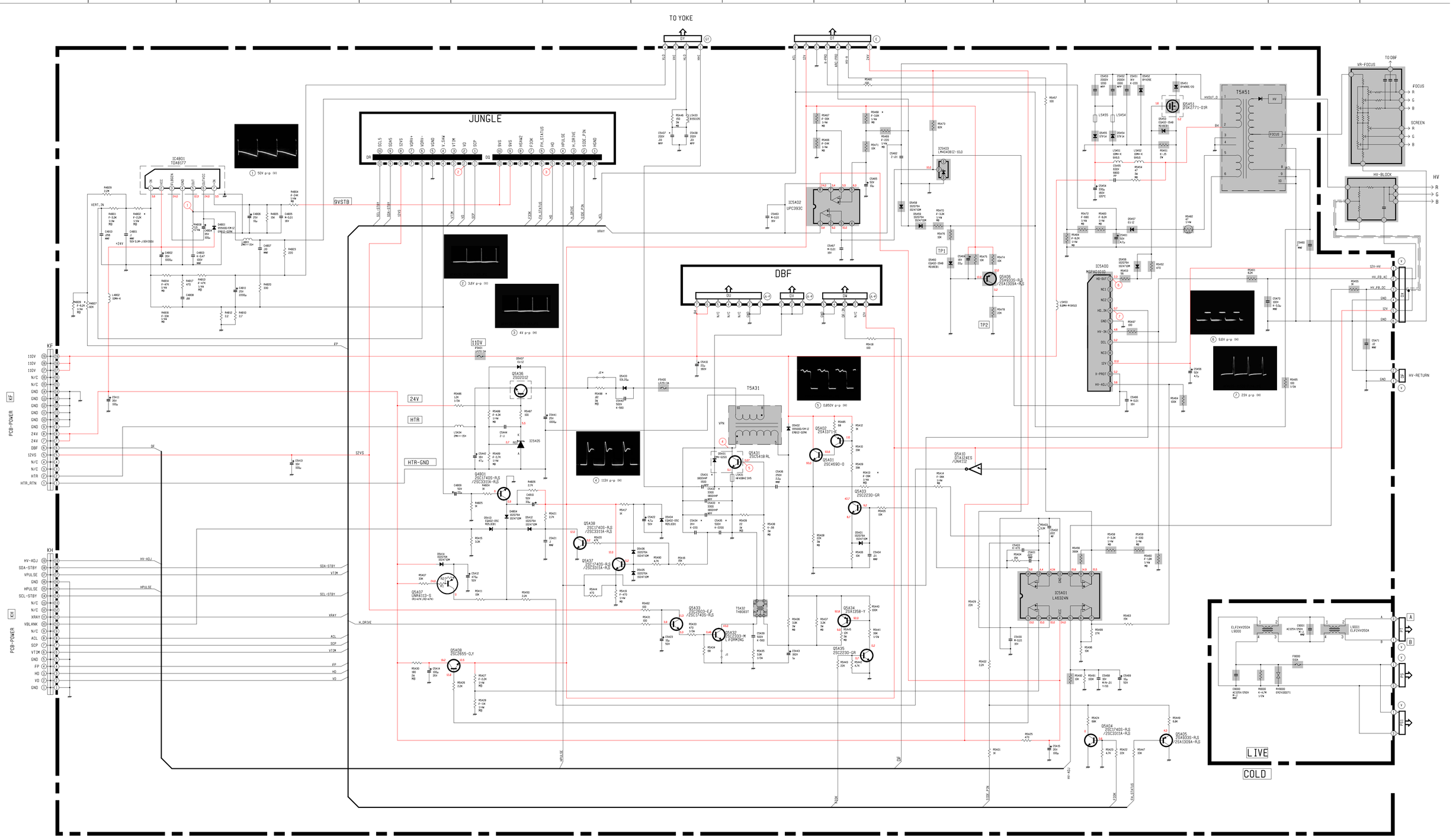
6. This is a basic schematic diagram. Some sets may be subject to modification according to engineering improvement.

SHADED COMPONENTS HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE IN THE SERVICE MANUAL. DON'T DEGRADE THE SAFETY OF THE RECEIVERS THROUGH IMPROPER SERVICING.

SERVICE TECHNICIAN WARNING:
X-RADIATION PRECAUTION
THIS PRODUCT INCLUDES CRITICAL ELECTRICAL AND MECHANICAL PARTS ESSENTIAL FOR X-RADIATION PROTECTION.
TO AVOID POSSIBLE EXPOSURE TO X-RADIATION TAKE X-RADIATION PROTECTIVE MEASURES FOR PERSONNEL DURING SERVICING.
SEE SERVICE INSTRUCTIONS FOR SPECIFIED REPLACEMENT PARTS AND SERVICE ADJUSTMENTS.

CONTENTS

GROUP	MODEL			
1	WS-55511	WS-65511	WT-48511	
2	WS-55611			
3	WS-55711	WS-65711	WS-65712	WS-855
4	WS-72711			



CONTENTS

GROUP	MODEL			
1	WS-55511	WS-65511	WT-48511	
2	WS-55711			
3	WS-55711	WS-65711	WS-65712	WS-855
4	WS-73711			

LIVE

COLD

PCB-MAIN PT

PCB-SIGNAL-3 KC

PCB-DM POWER PF

STANDBY TRANSFORMER

MAIN TRANSFORMER VPM450

CONVERGENCE OUT AMPLIFIER

CONV-GENERATOR

AUDIO AMPLIFIER

POWER

(TO SIGNAL PWB)

PCB-SVM KA

PCB-SVM KK

PCB-CRT (R) SM

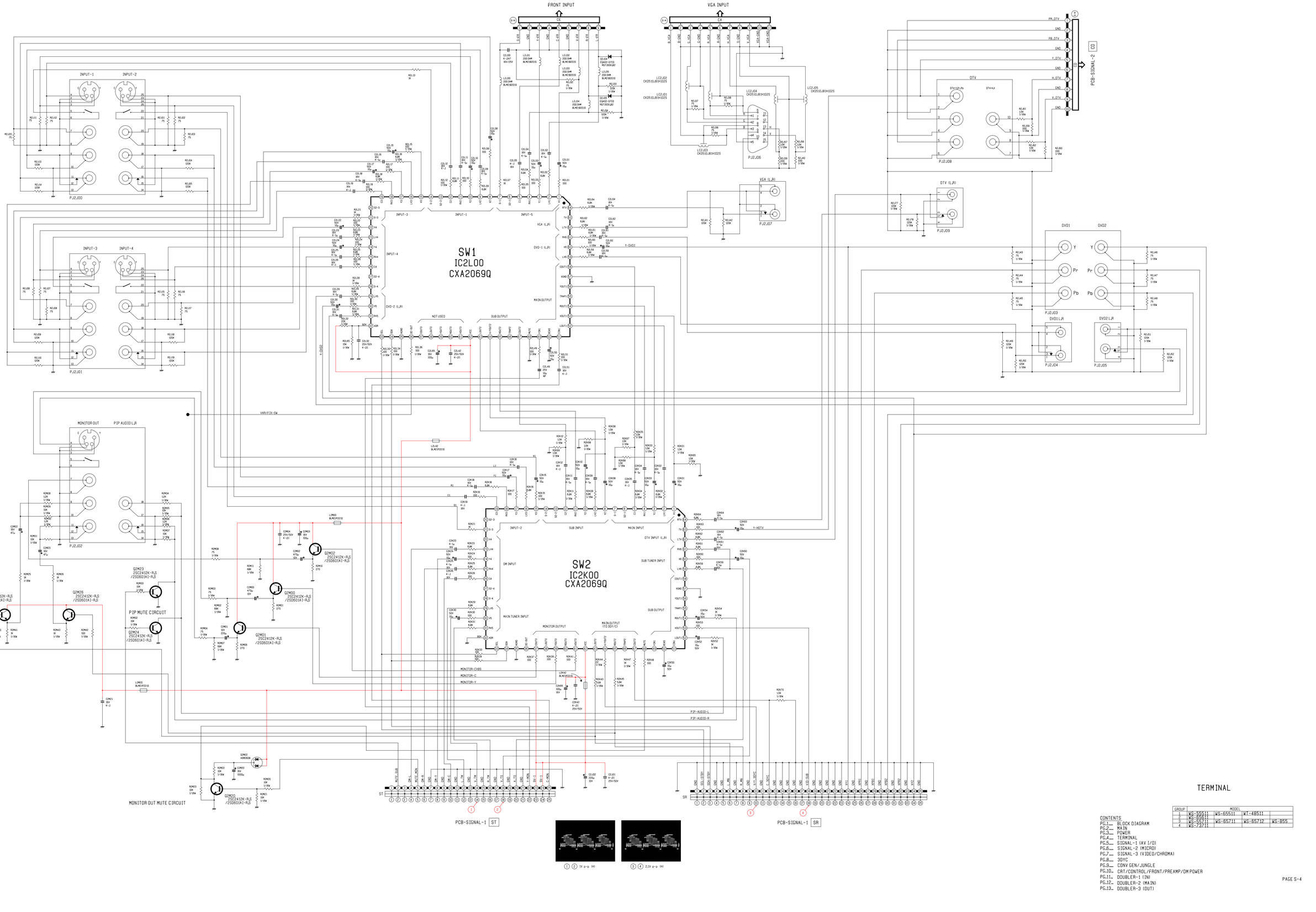
PCB-MAIN KF

PCB-MAIN KH

(TO SPEAKERS)

CONTENTS

GROUP	MODEL				
1	WS-55511	WS-65511	WT-48511		
2	WS-55711				
3	WS-55711	WS-65711	WS-65712	WS-B55	
4	WS-73711				



TERMINAL

GROUP	MODEL				
1	WS-55511	WS-65511	WT-48511		
2	WS-55611				
3	WS-55711	WS-65711	WS-65712	WS-855	
4	WS-73711				

CONTENTS

CONTENTS

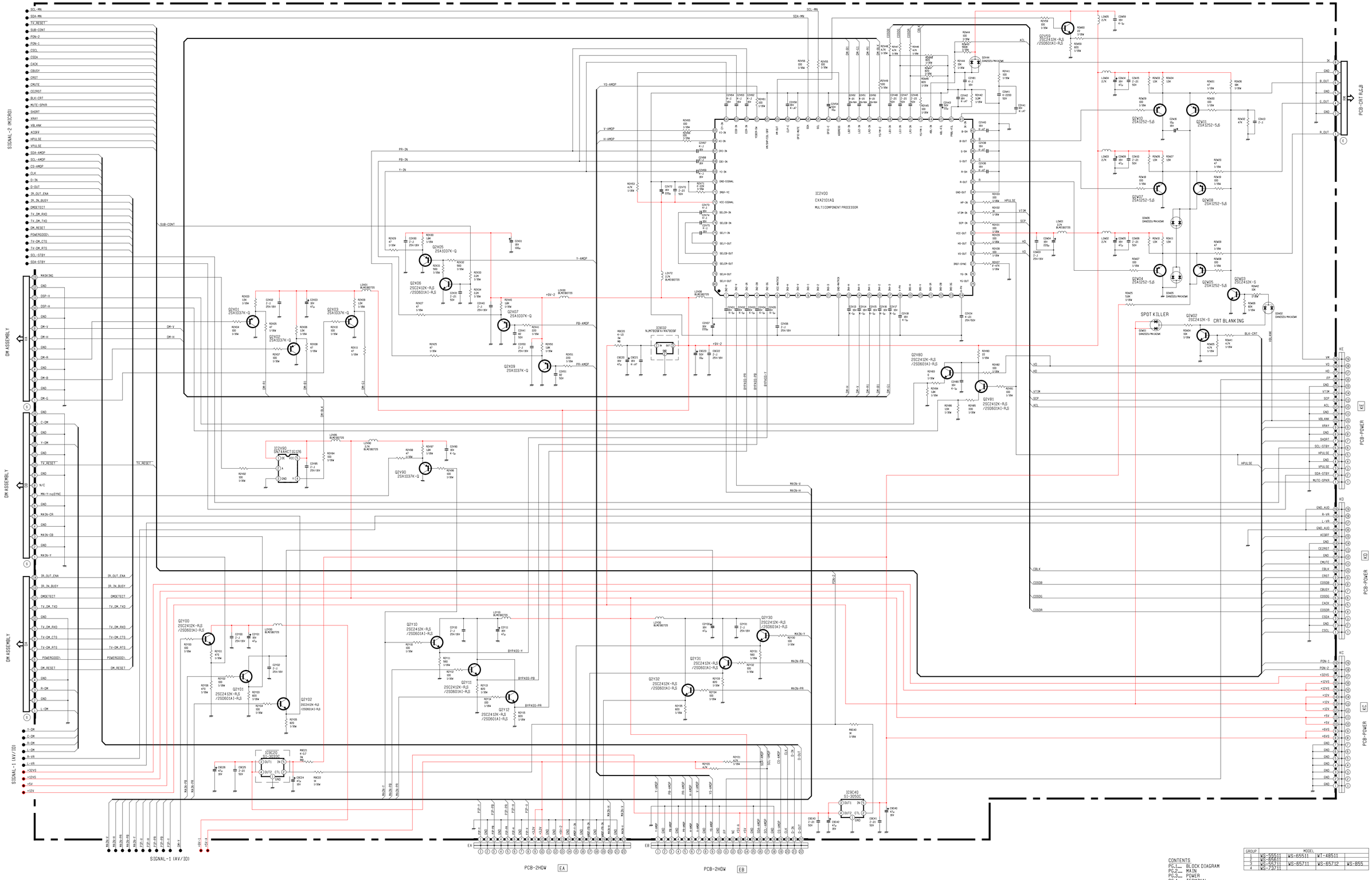
GROUP	MODEL			
1	WS-55511	WS-65511	WT-48511	
2	WS-65611			
3	WS-55711	WS-65711	WS-65712	WS-B55
4	WS-73711			

※EXCEPT WHERE NOTED, ALL OPEN-ENDED CIRCUIT PATHS CONNECT TO THE SIGNAL-3 SCHEMATIC

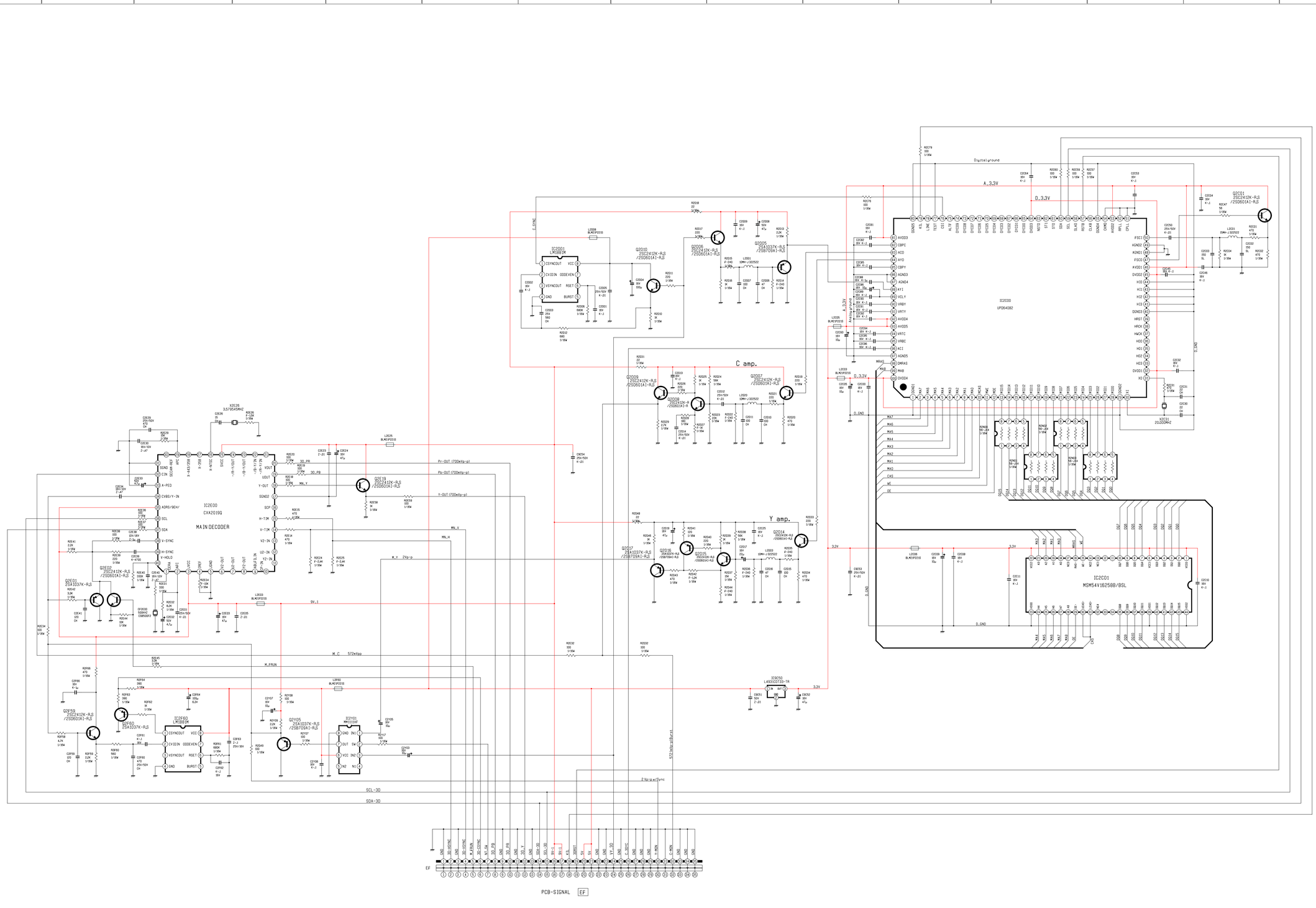
MICRO

GROUP	MODEL			
1	WS-55511	WS-65511	WT-48511	
2	WS-65611			
3	WS-55711	WS-65711	WS-65712	WS-B55
4	WS-73711			

CONTENTS

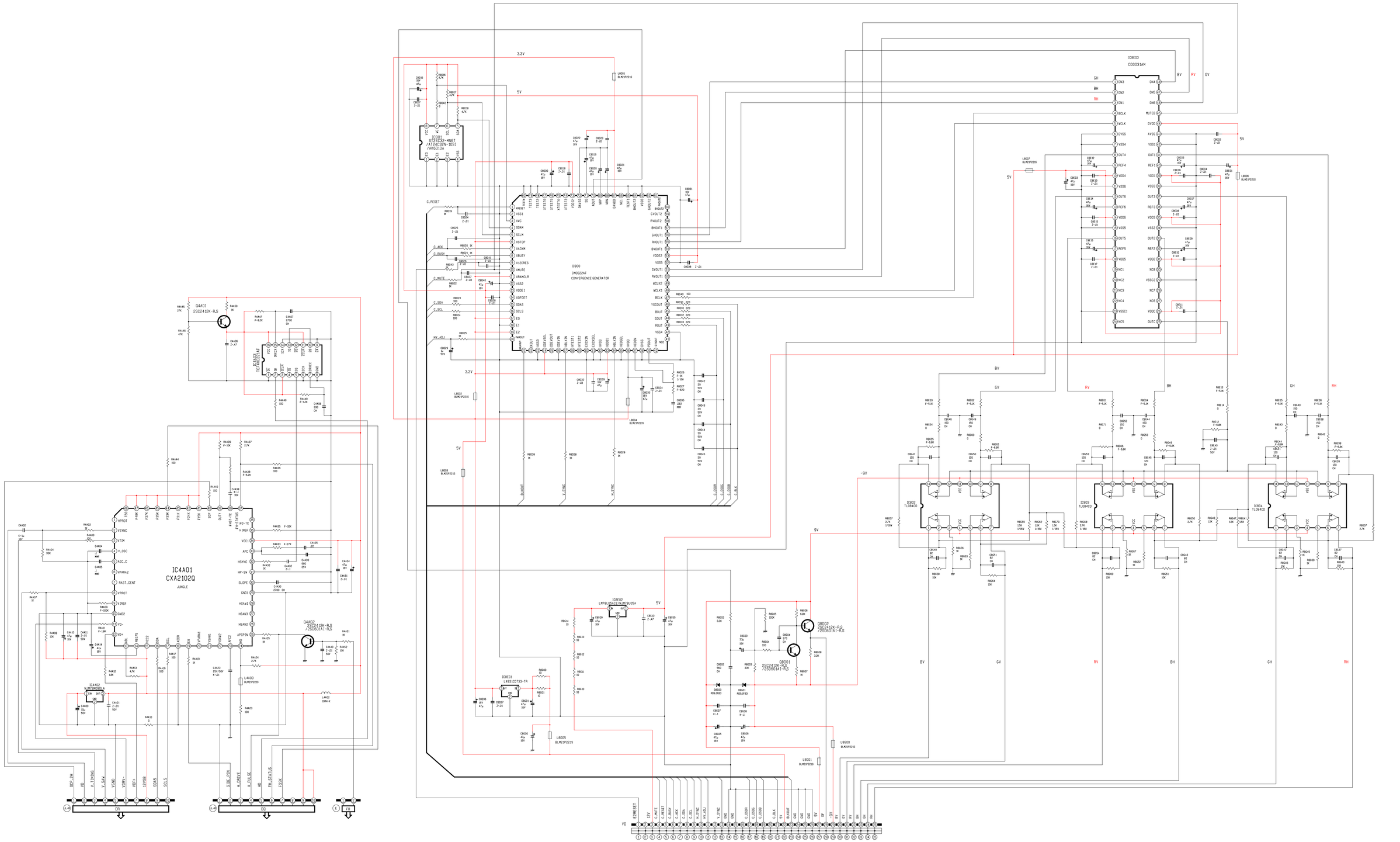


GROUP	MODEL			
1	WS-55511	WS-65511	WT-48511	
2	WS-65611			
3	WS-55711	WS-65711	WS-65712	WS-855
4	WS-73711			



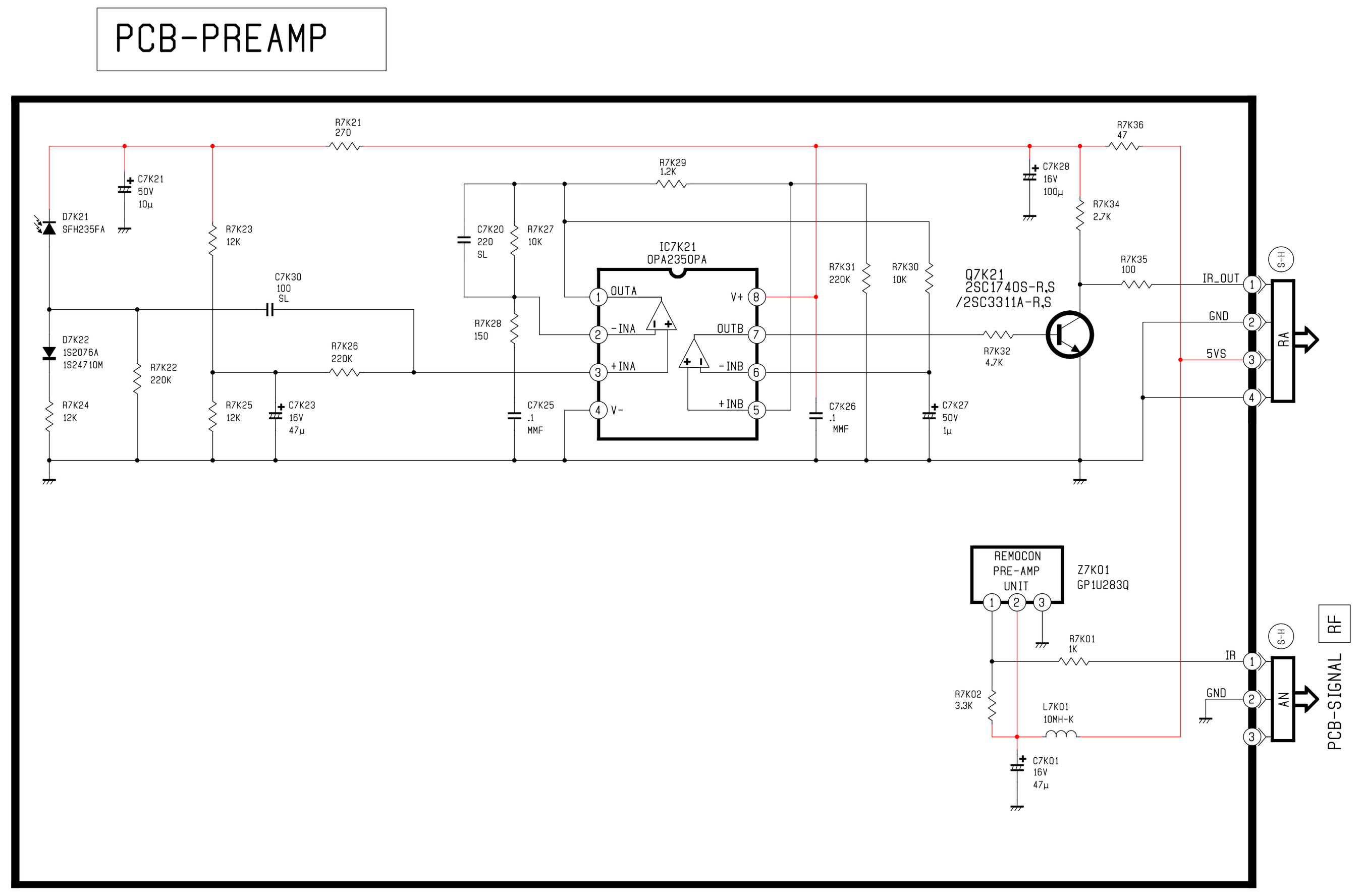
GROUP	MODEL				
1	WS-55511	WS-65511	WT-48511		
2	WS-55611				
3	WS-55711		WS-65712		WS-855
4	WS-73711				

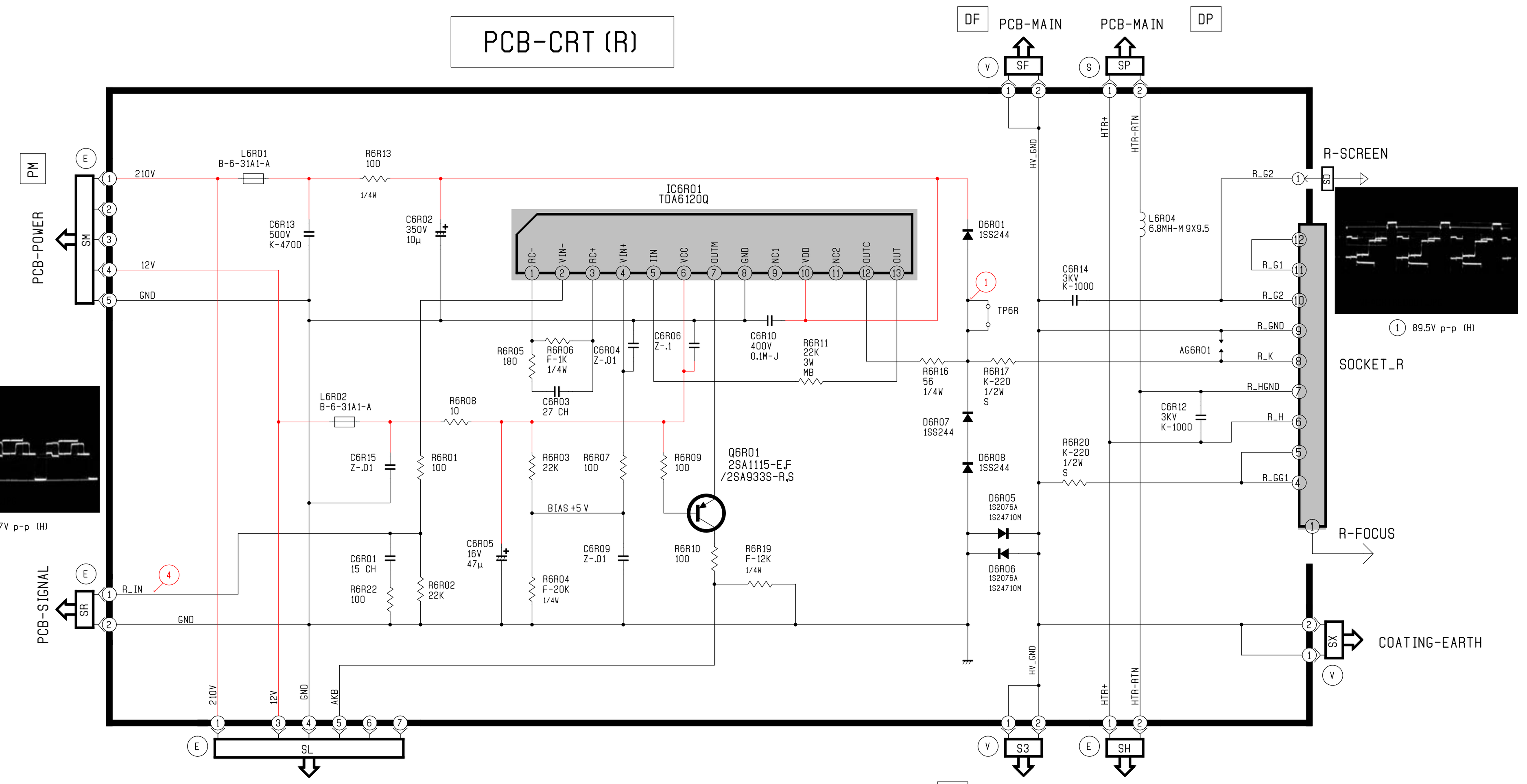
CONTENTS

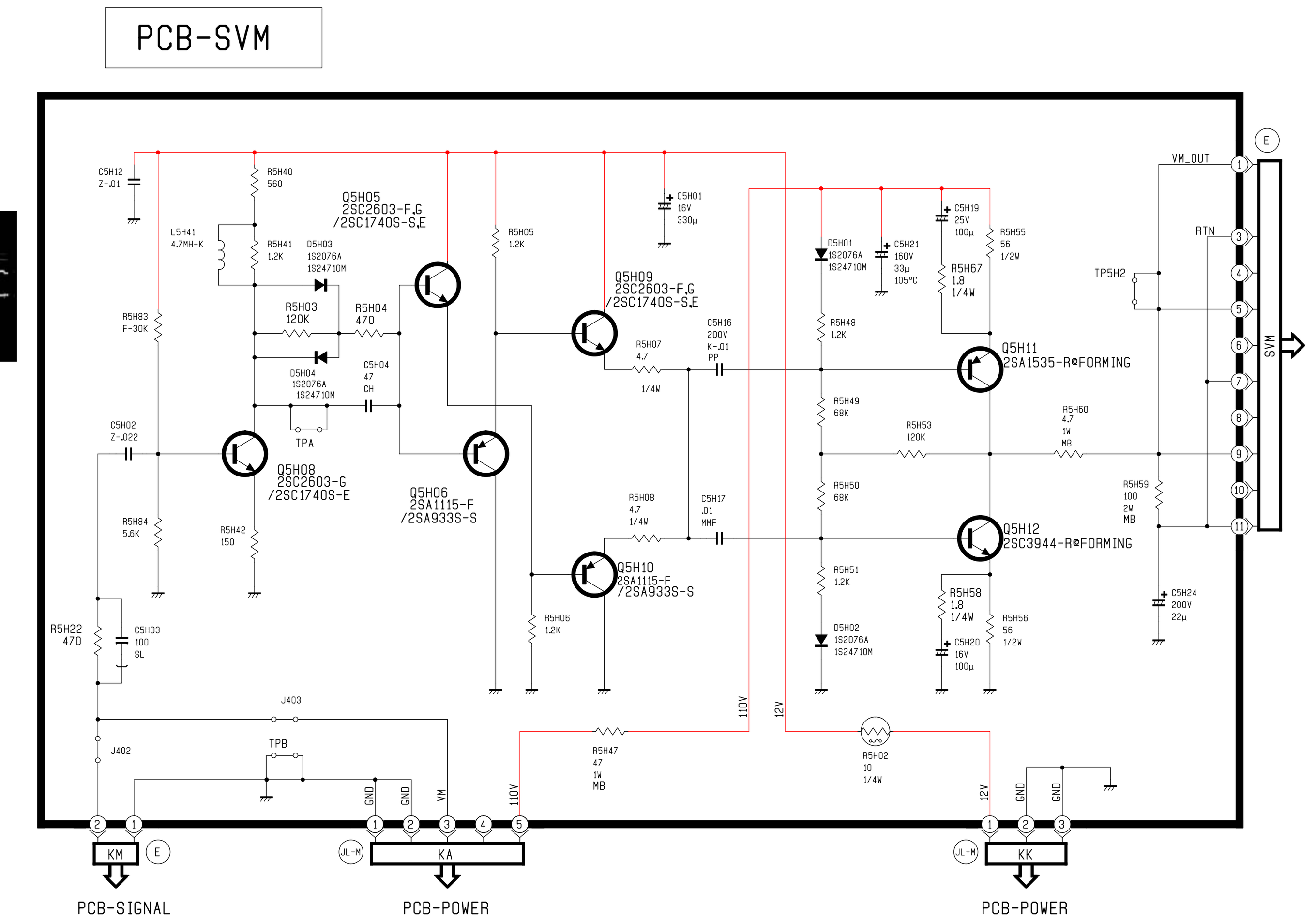


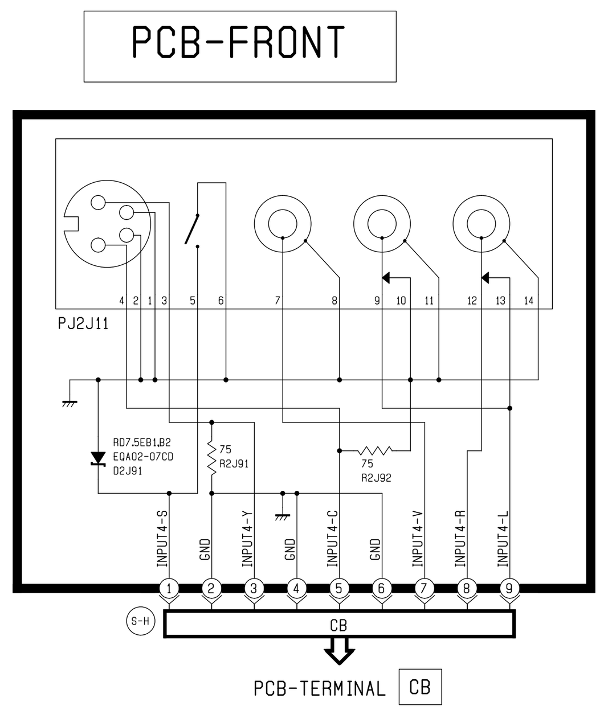
GROUP	MODEL				
1	WS-55511	WS-65511	WT-48511		
2	WS-55611				
3	WS-55711	WS-65711	WS-65712	WS-855	
4	WS-73711				

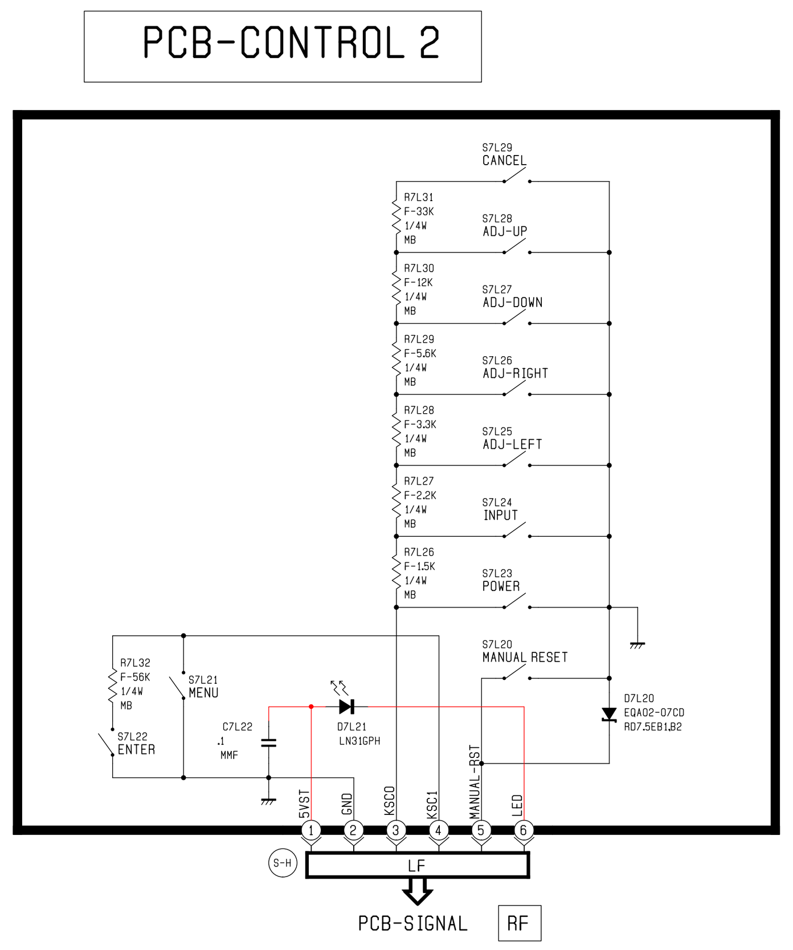
CONTENTS

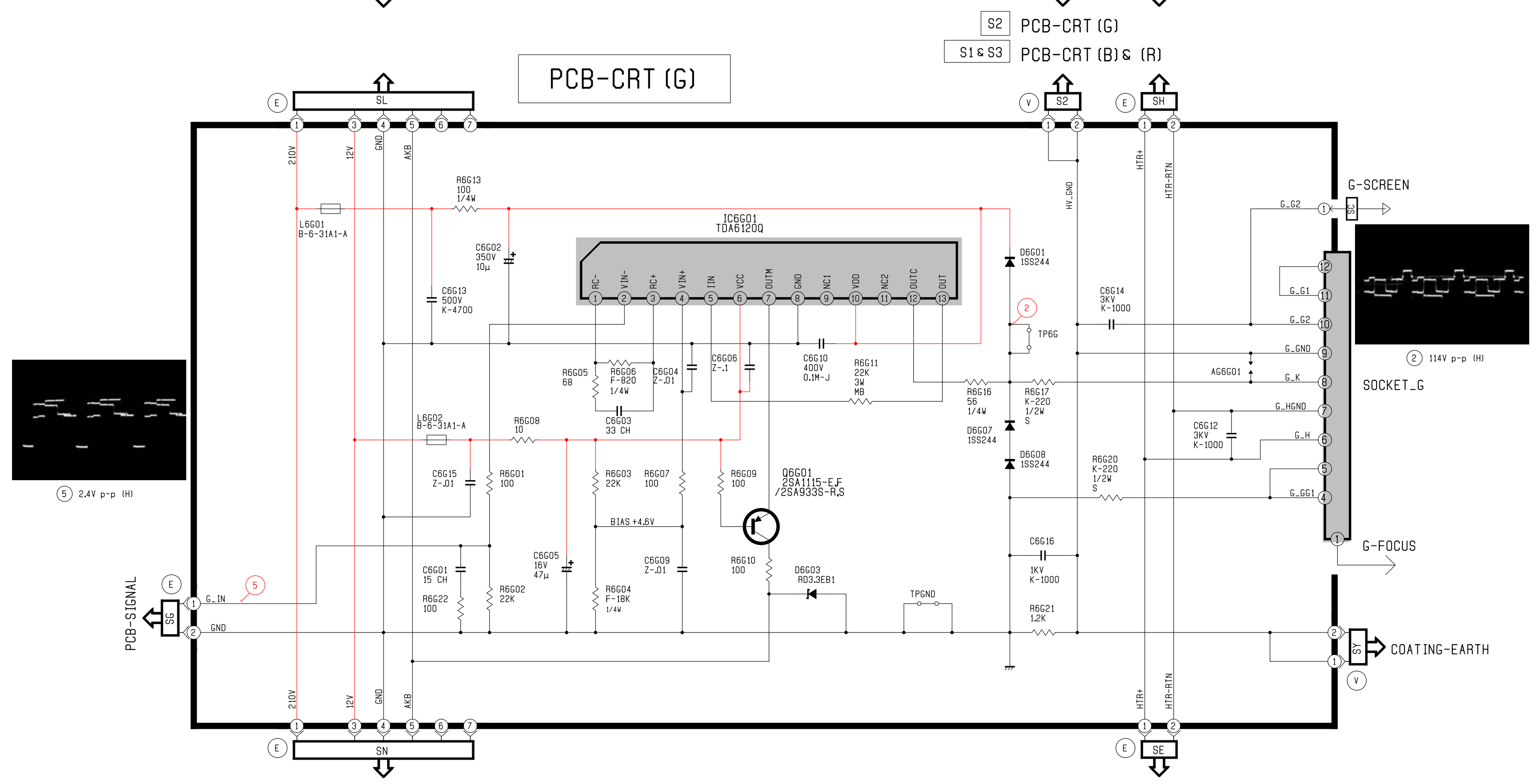


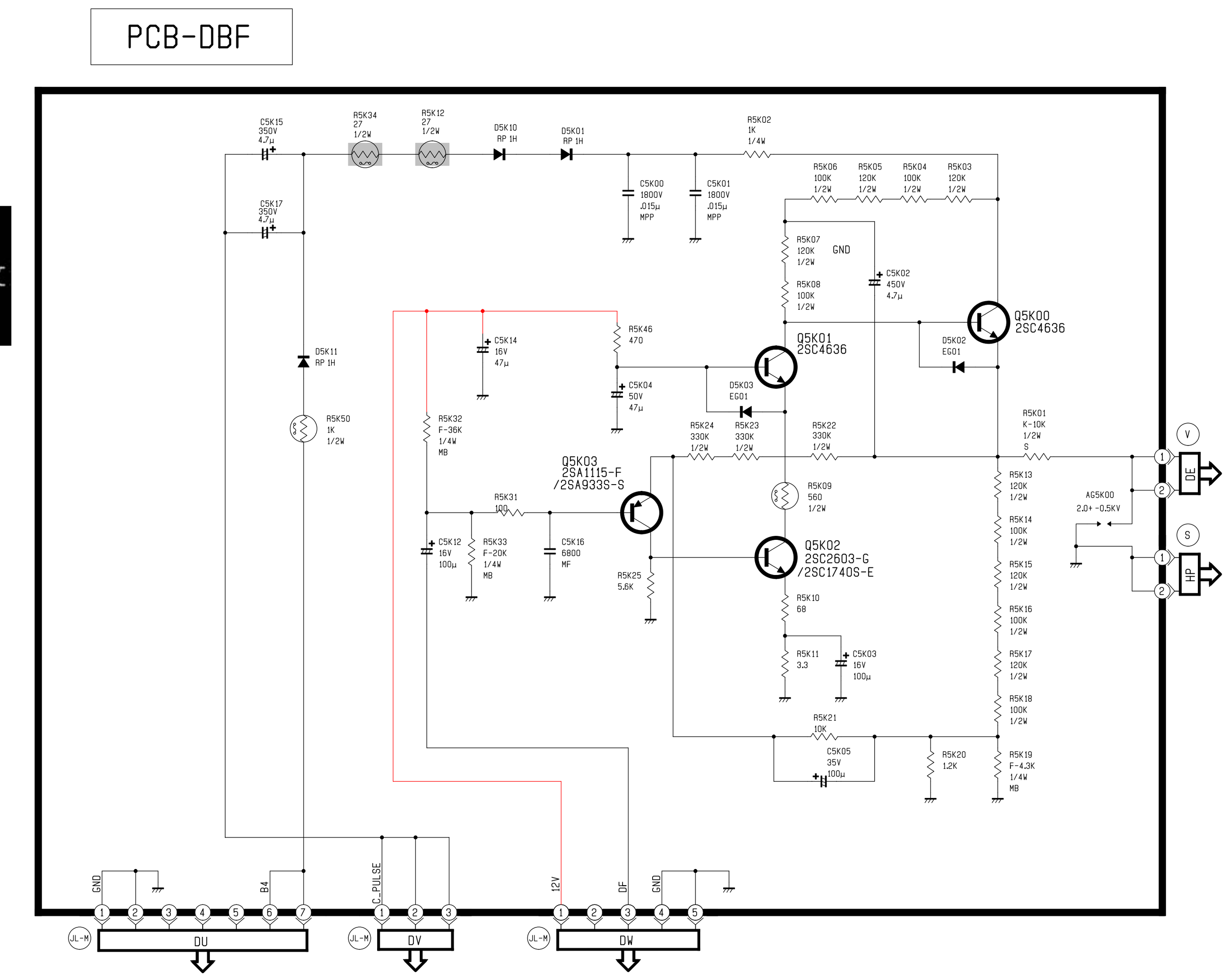


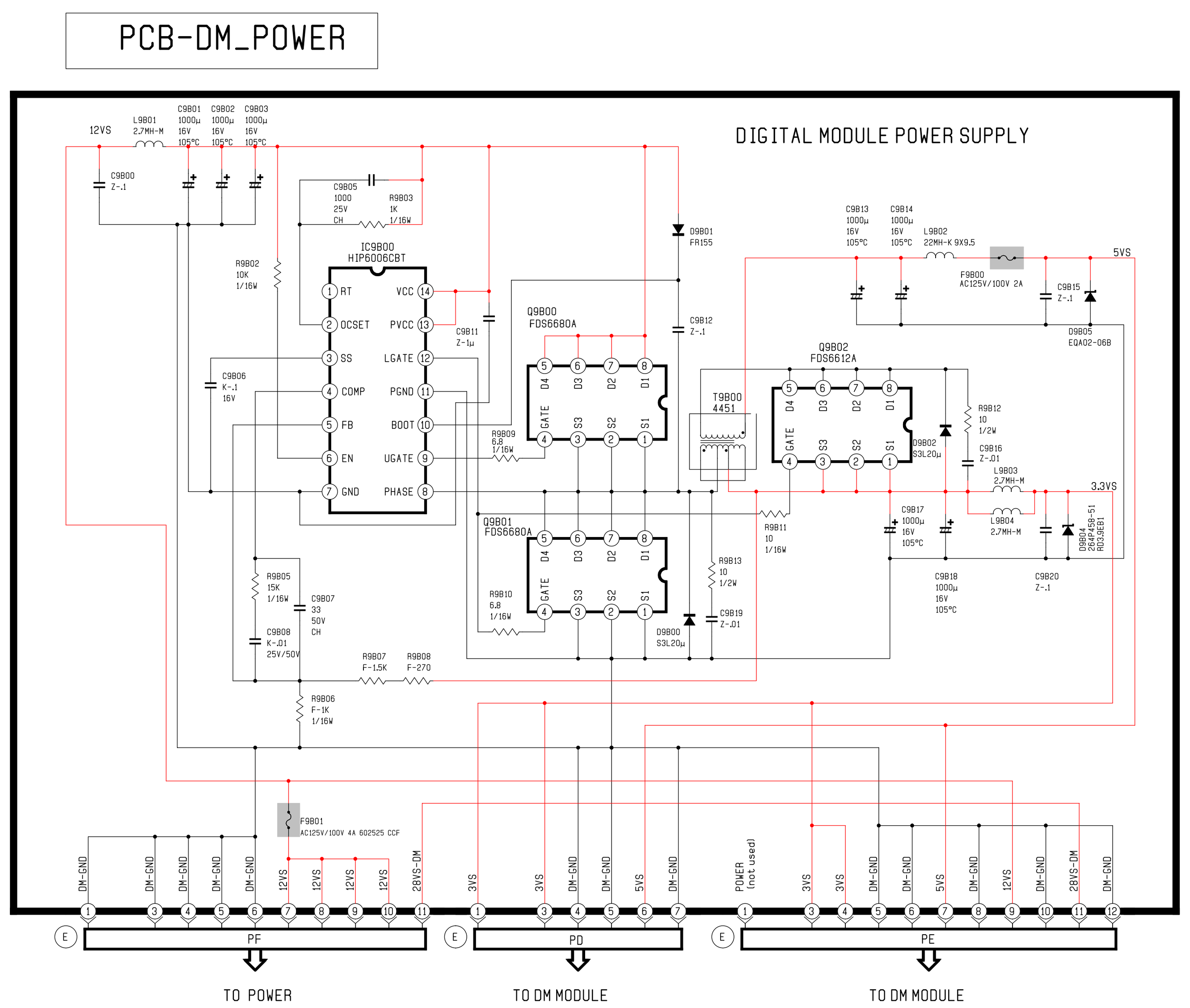


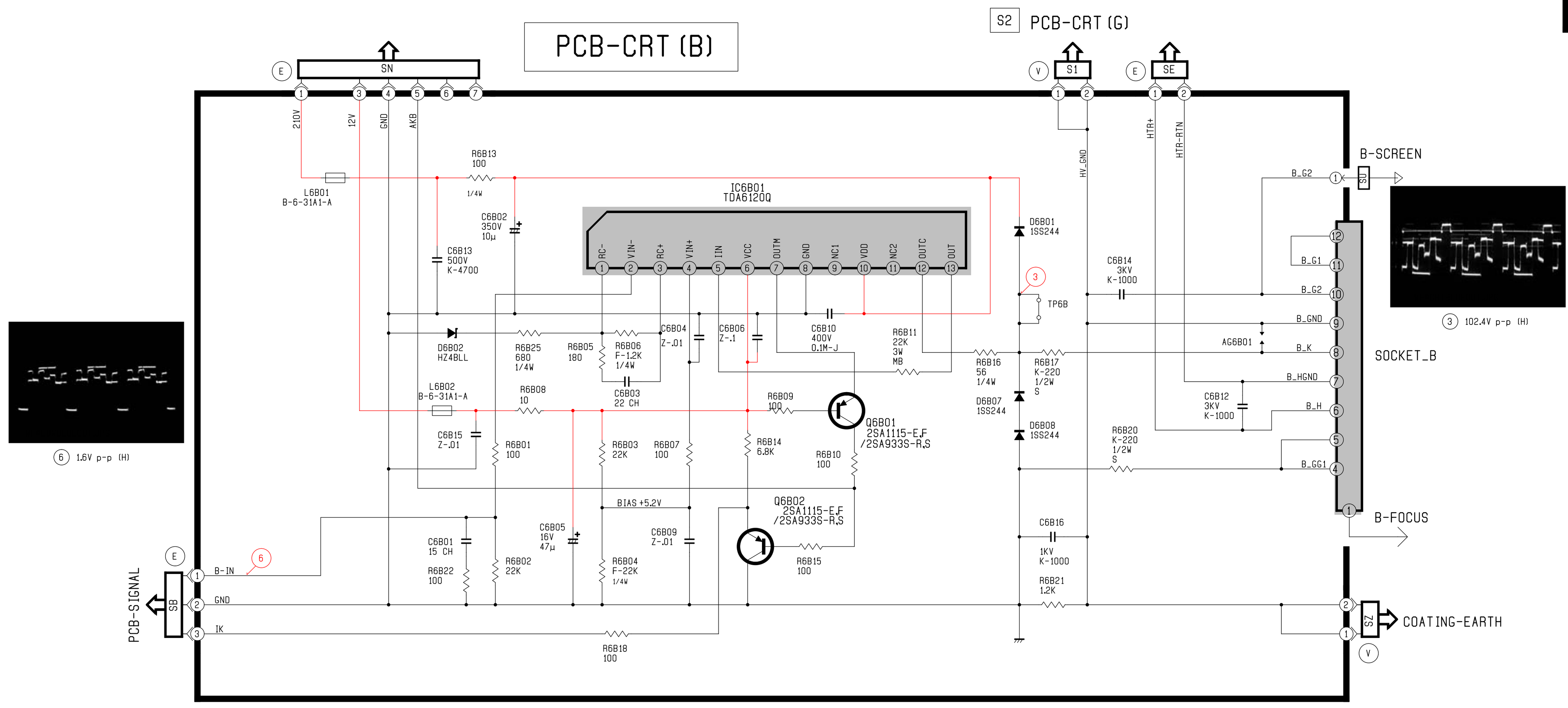


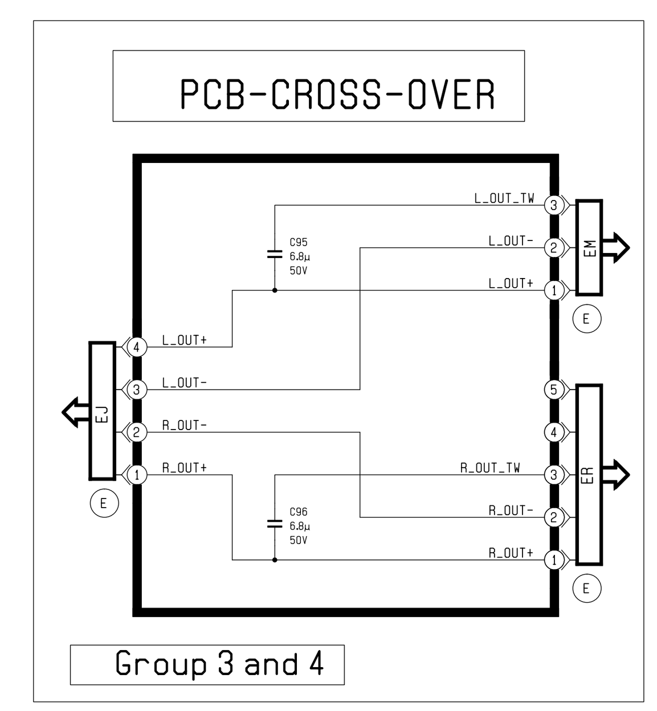












GROUP	MODEL			
1	WS-55511	WS-65511	WT-48511	
2	WS-65611			
3	WS-55711	WS-65711	WS-65712	WS-B55
4	WS-73711			

CONTENTS

※EXCEPT WHERE NOTED, ALL OPEN-ENDED CIRCUIT PATHS CONNECT TO THE TERMINAL-2 SCHEMATIC

GROUP	MODEL			
1	WS-55511	WS-65511	WT-48511	
2	WS-65611			
3	WS-55711	WS-65711	WS-65712	WS-B55
4	WS-73711			

CONTENTS

IC7H02
TMC57127PPM

IC7H07
SLA4028F3N

IC7H03
M5M534D31E-KKTS-K

IC7H09
TC74HC17007AF

IC7H11
TC74AC157FN

IC7H12
TC74AC157FN

IC7H13
TC74AC157FN

IC7H14
TC74AC157FN

IC7H00
NT56V16516AGT-7

IC7H01
NT56V16516AGT-7

IC7H04
MS1795/18FP

IC7H05
TC74HC221AF

IC7H06
TLC2932IPW

IC7H08
TLC2932IPW

Q7H1D
2SC2412K-Q

Q7H6D
2SC2412K-Q

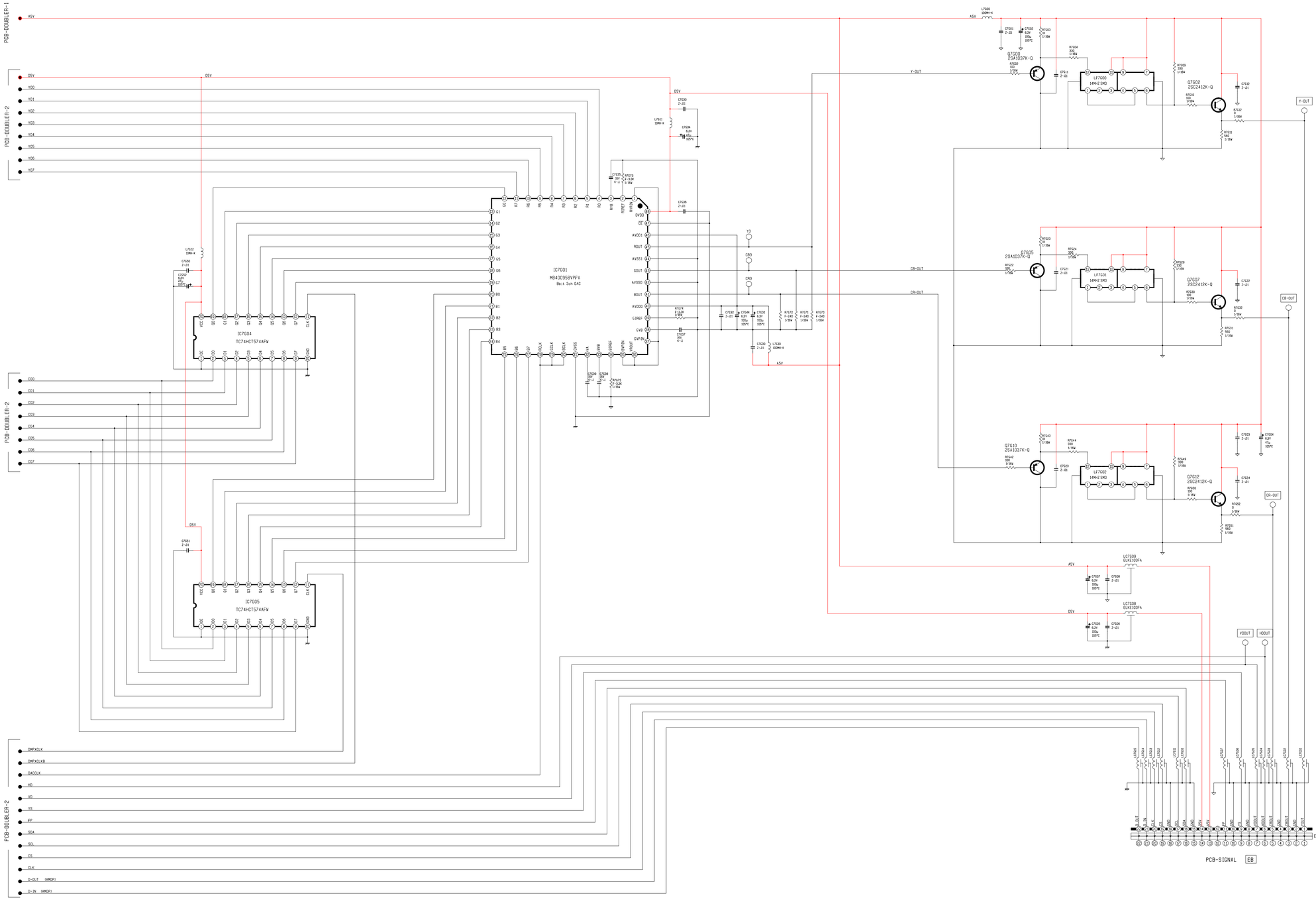
X7H01
12007519Y
32.000MHz

D3.3V
A5V
D5V

CONTENTS

GROUP	MODEL				
1	WS-55511	WS-65511	WT-48511		
2	WS-65611				
3	WS-55711	WS-65711	WS-65712	WS-855	
4	WS-73711				

* EXCEPT WHERE NOTED, ALL OPEN-ENDED CIRCUIT PATHS CONNECT TO THE DOUBLER-1 SCHEMATIC



GROUP	MODEL			
1	WS-55511	WS-65511	WT-48511	
2	WS-65611			
3	WS-55711	WS-65711	WS-65712	WS-855
4	WS-73711			

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