

NAD **SERVICE**
MANUAL

2240PE
POWER AMPLIFIER

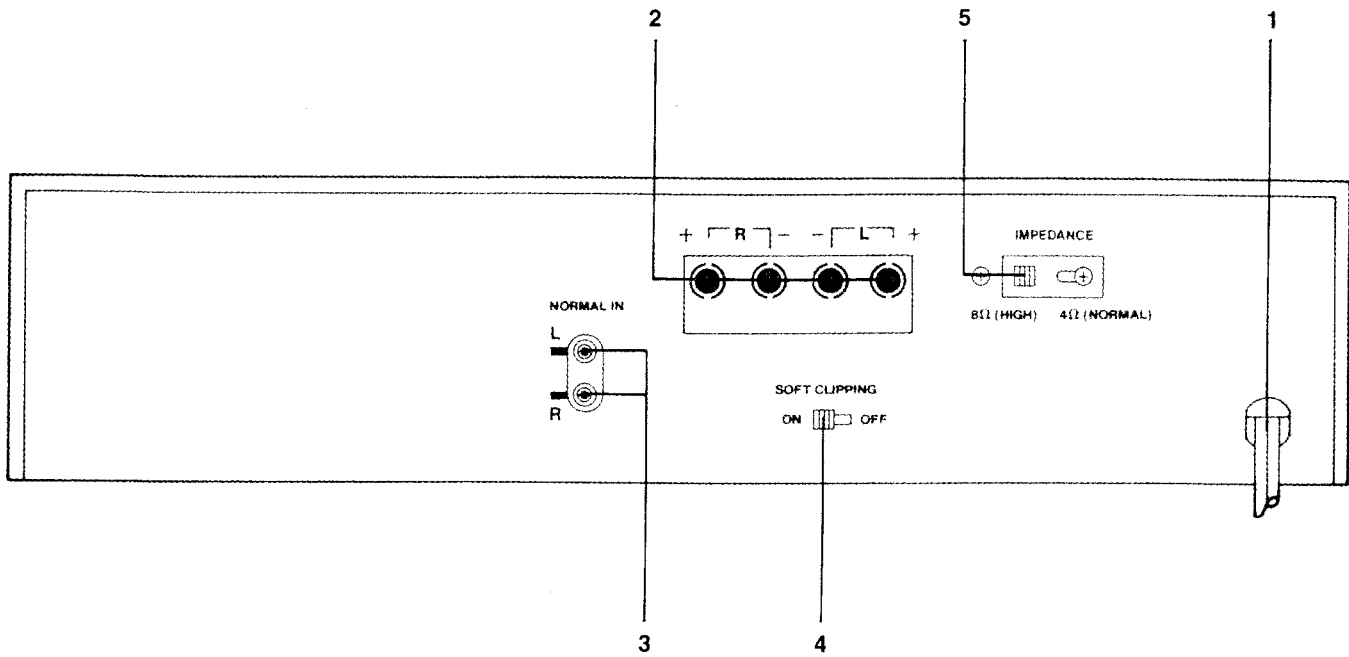
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REAR PANEL

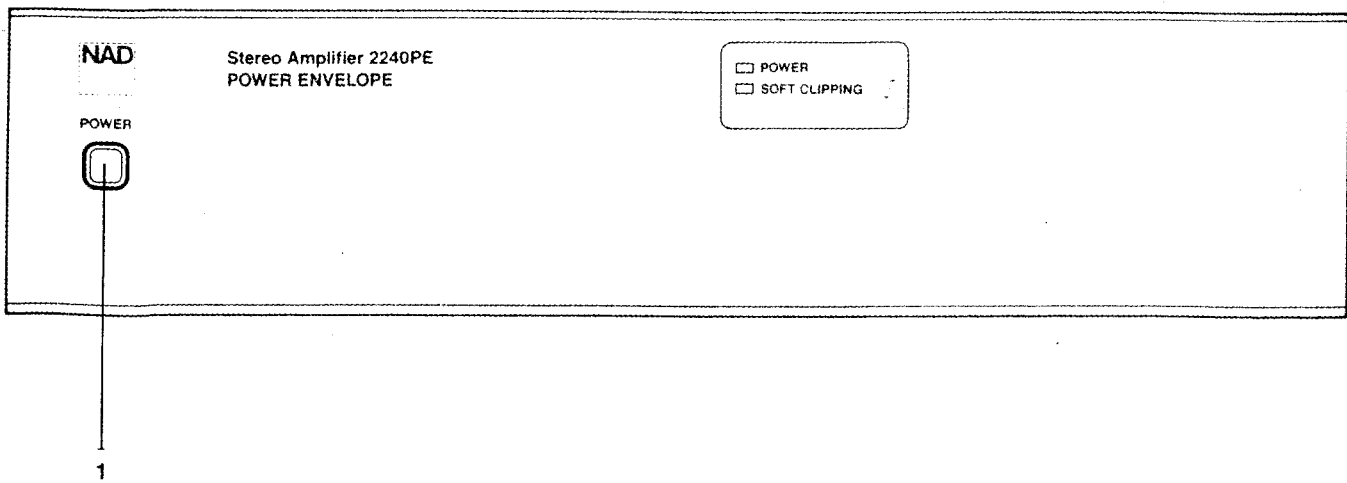
1. AC Line Cord.
2. Speakers.
3. Normal Inputs.
4. Soft Clipping.
5. Speaker Impedance.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION TO REDUCE
THE RISK OF ELECTRIC
SHOCK, DO NOT REMOVE
COVER (OR BACK).
NO USER-SERVICEABLE
PARTS INSIDE. REFER
SERVICING TO QUALIFIED
SERVICE PERSONNEL.



FRONT PANEL

1. Power.



Specifications

NAD 2240PE Stereo Amplifier

Note: Specifications are measured in accordance with EIA Standard RS-490 (IHF A-202). Measurements referred to 8 ohm are taken with the Speaker Impedance selector set to 8 ohm (High). Measurements for 4 and 2 ohm are taken with impedance selector at 4 ohm (Normal).

Power Amplifier Section

CONTINUOUS AVERAGE POWER

OUTPUT AT 8 OHM (minimum RMS power per channel, both channels driven, with no more than the rated distortion)		40W(16 dBW)
Rated distortion (THD), 20 Hz - 20 kHz		0.03%
Clipping power, 1 kHz (maximum continuous power per channel)		50 W
Dynamic Headroom at 8 ohm		+6 dB
Dynamic power (maximum short-term power per channel)	8 ohm	160 W
	4 ohm	200 W
	2 ohm	250 W
Damping factor		>50
Slew factor		>50
Slew rate		15V/usec
T.H.D. and SMPTE I.M. distortion from 250 mW to rated output		<0.03%
IHF I.M. (CCIF IM) and T.I.M. distortion at rated output		<0.03%
Input impedance		22 kohm
Input sensitivity for 1 Wa/40 W out		160 mV/1.0 V
Power amp gain		25 dB (18X)
Low Level (audio muting)		-20 dB
Physical Specifications		
Width x Height x Depth		42 x 10.8 x 38 cm. 16.5 x 4.25 x 15 in.
Net Weight		6.425 kg
Shipping Weight		7.72 kg
Power Consumption		50/60 Hz at 110, 120, 220, or 240 VAC 200 W

ALIGNMENT METHOD

AUDIO SECTION 2240PE

IMPORTANT

Speaker Impedance switch should be in 8 ohm position while adjusting center voltage and idling current.

INITIAL ADJUSTMENT (No load connected)

A. CENTER VOLTAGE

1. Connect DC millivoltmeter to L channel output terminals.
2. Turn on and adjust to $0\text{ V} \pm 30\text{mV}$ with VR401 (10KB). Connect DC millivoltmeter to R channel output terminals and adjust VR402 to $0\text{ V} \pm 30\text{mV}$.

B. IDLING CURRENT

1. Remove solder short across R461 and R462.
2. Connect DC millivoltmeter across R471 (1 ohm) (output transistor's collector resistor) and adjust VR403 (1KB) for 26 - 30mV reading on meter. Repeat adjust with VR404 (1KB), connecting meter across R472 (1 ohm).
3. leave power on for minimum 5 minutes.

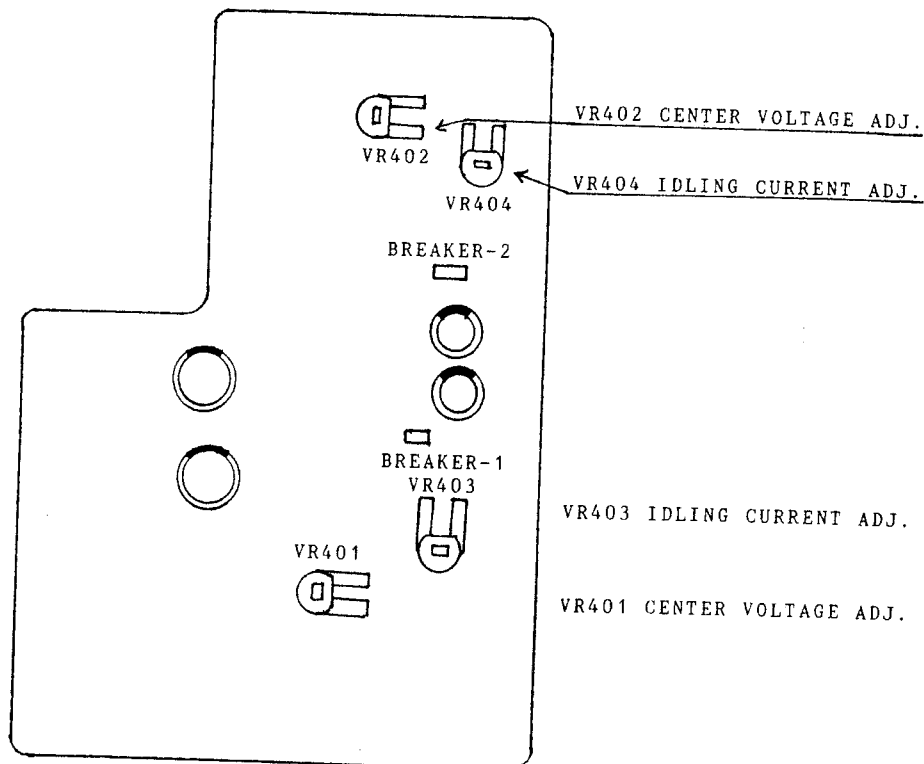
FINAL ADJUSTMENT

C. CENTER VOLTAGE

1. Repeat step A above.

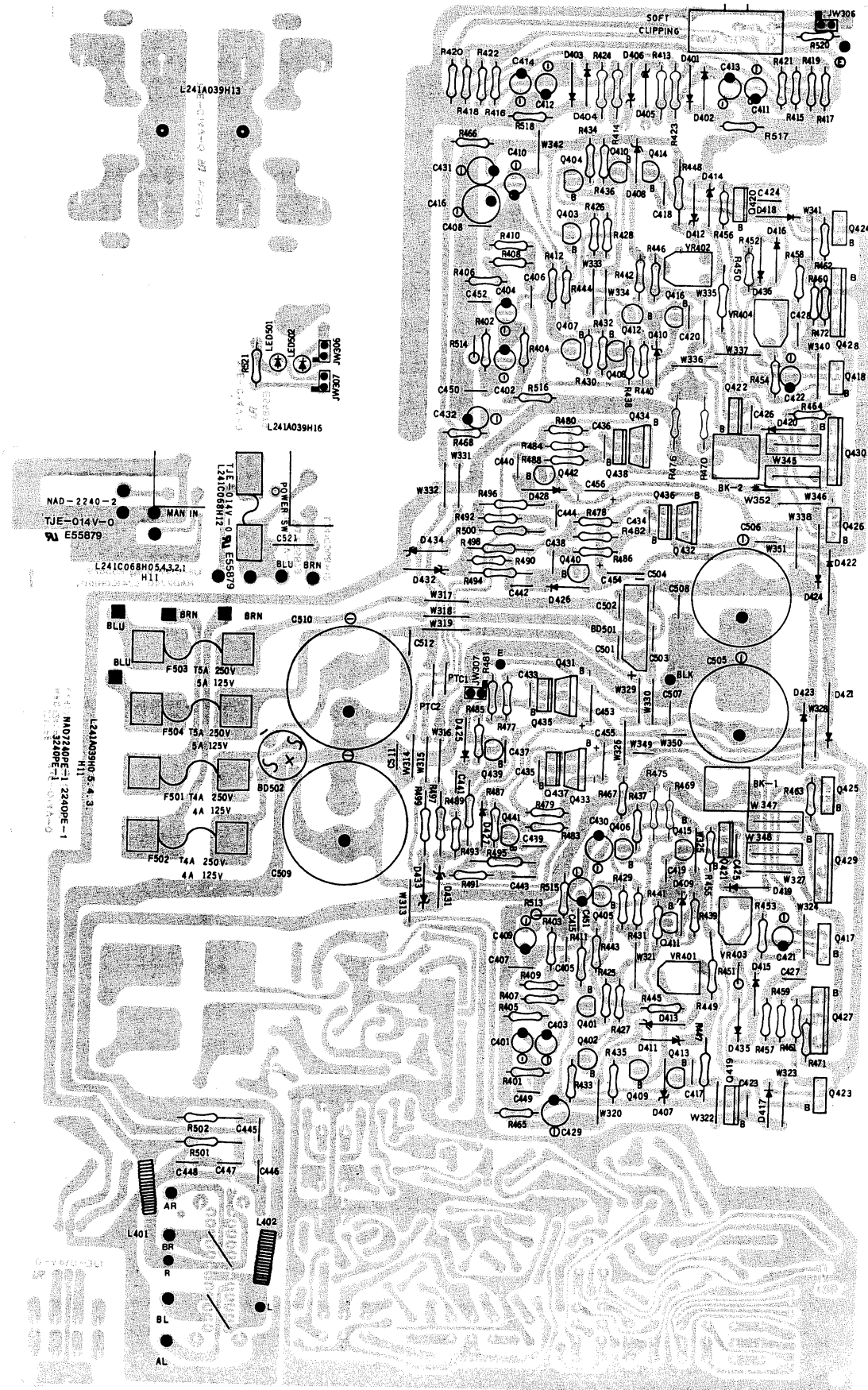
D. IDLING CURRENT

1. Repeat step B and adjust with VR403, VR404 for 30mV reading on meter.
2. After the alignment is finished, 1 ohm resistor R471, R472 is shorted by solder short.

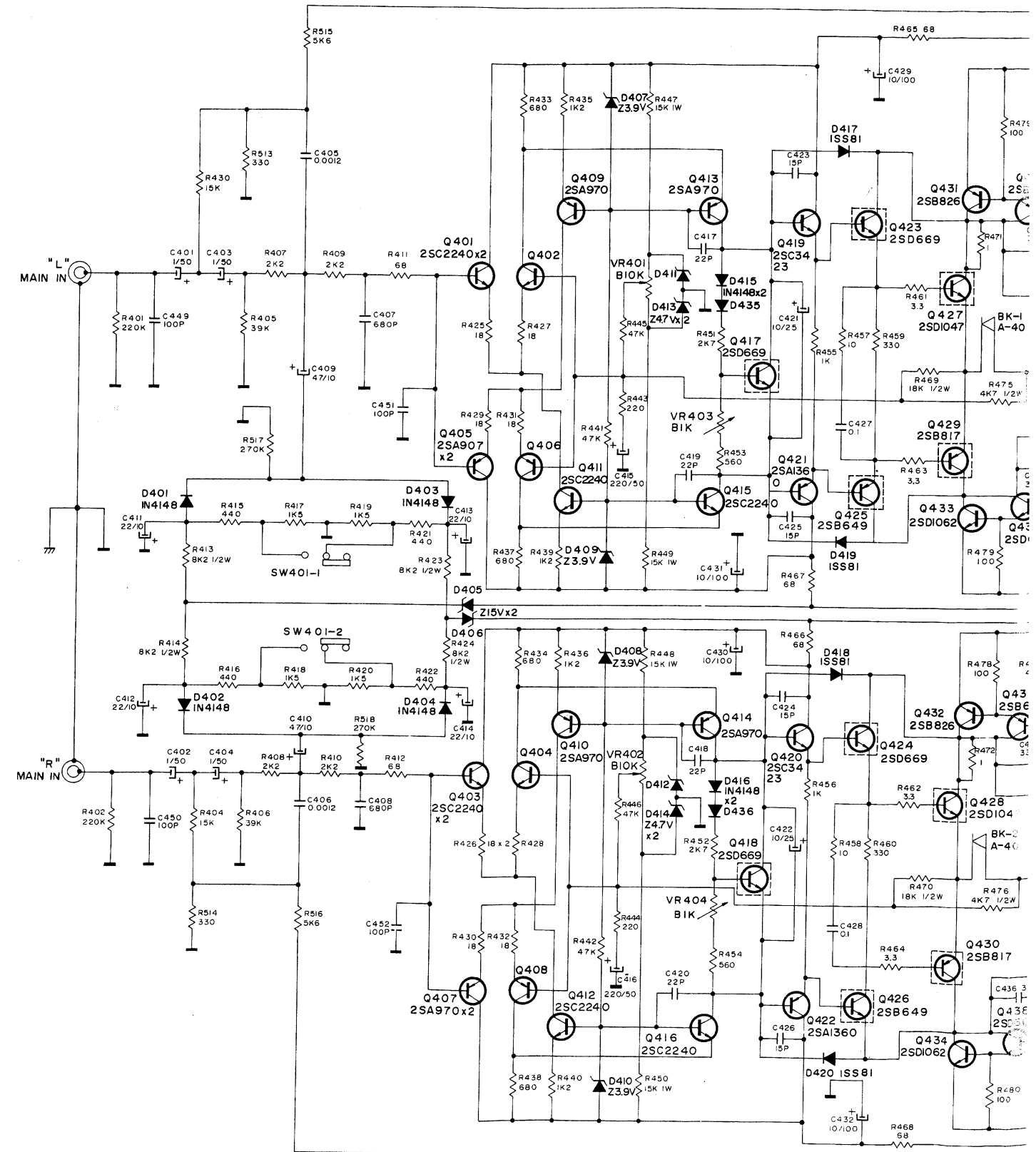


AMPLIFIER ADJUSTMENT POINTS

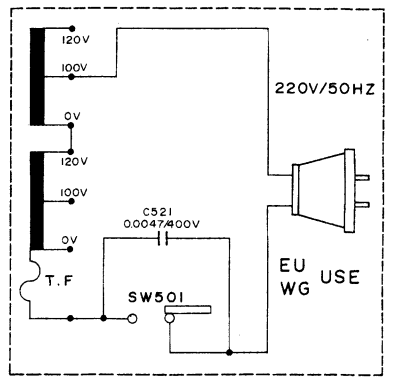
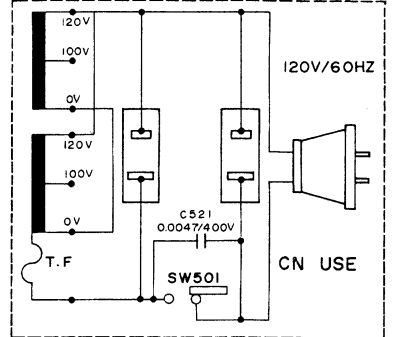
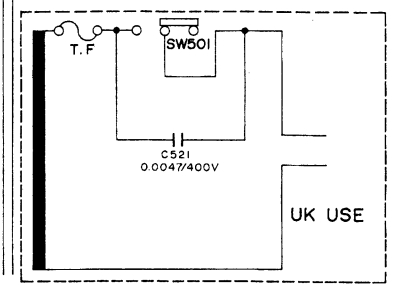
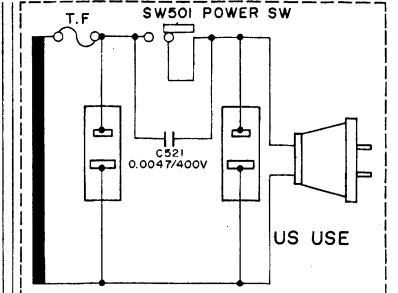
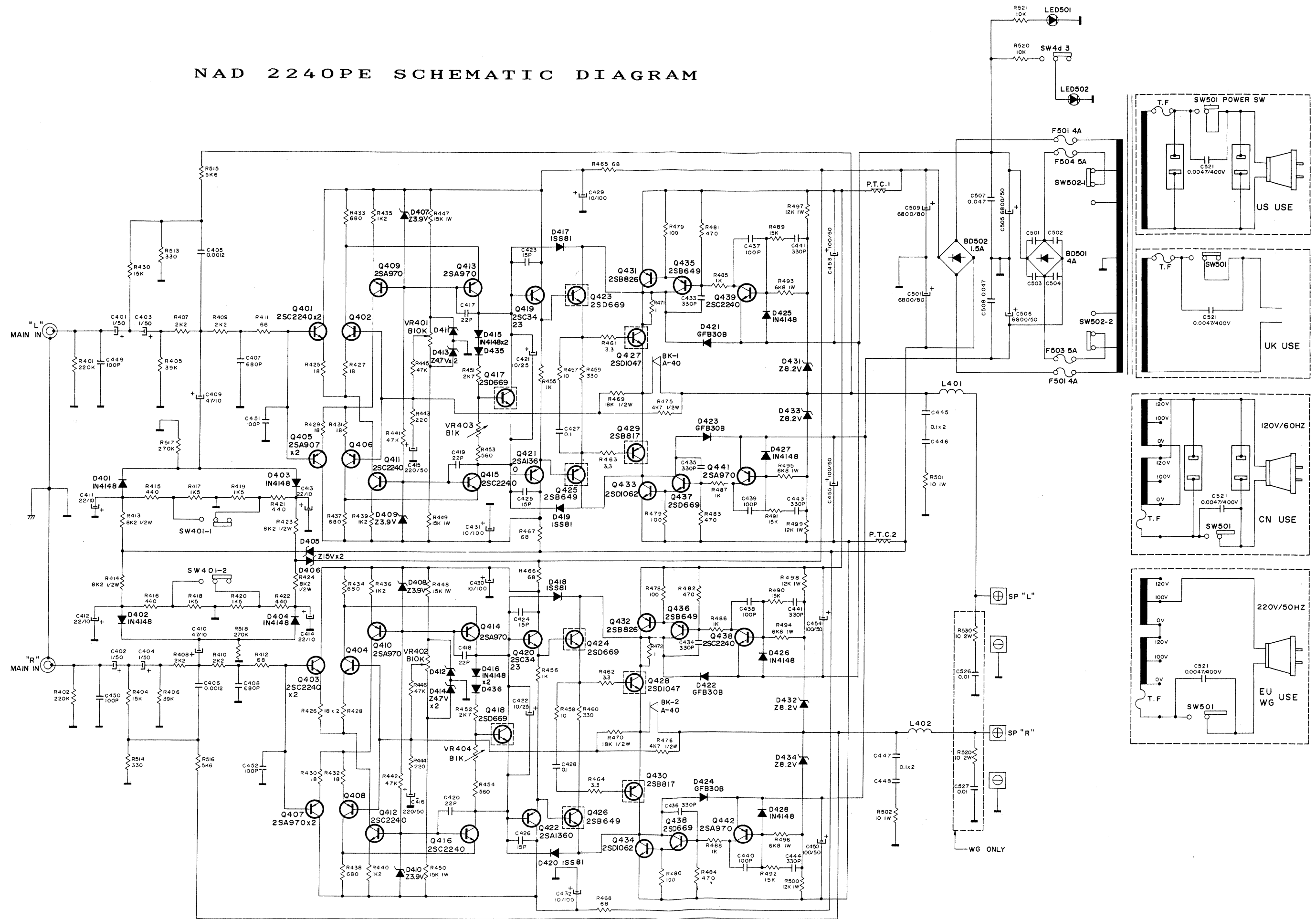
NAD 2240PE PCB COMPONENT LOCATION



NAD 2240PE SCHEMATIC DIAGRA



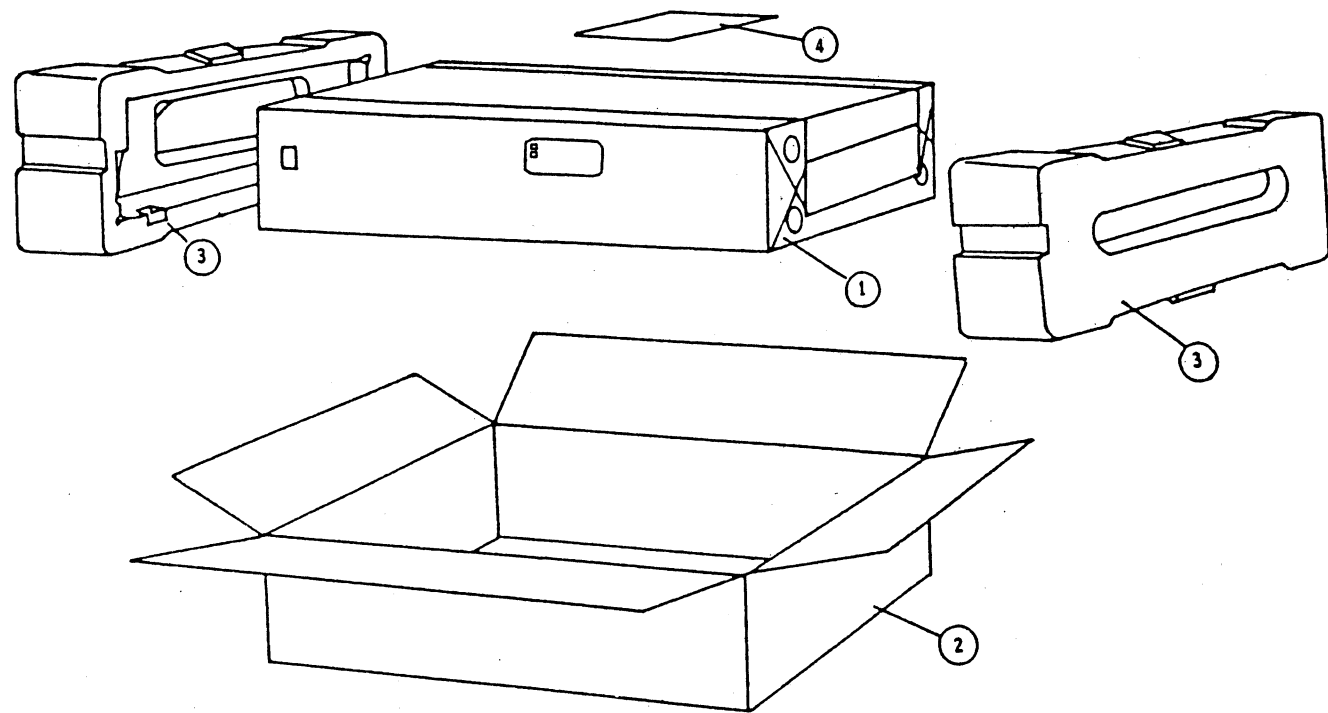
NAD 2240PE SCHEMATIC DIAGRAM



FR		GP	UK	EU	AS	SA	PARTS NUMBER		DESCRIPTION	SPECIFICATION	Q'TY	UNIT
US	CN	WG	EP	UT	JP							
*	*	*	*	*	*	*	L703B033G50					PCS
*	*	*	*	*	*	*	L703B033G60					PCS
*	*	*	*	*	*	*	L703B033G70					PCS
*	*	*	*	*	*	*	L703B033G80					PCS
*	*	*	*	*	*	*	L703B033G90					PCS
*	*	*	*	*	*	*	L241B121G01	PCB-POST ASSY				PCS
*	*	*	*	*	*	*	L241B121G02					PCS
*	*	*	*	*	*	*	U650S065H19	SCREW-B, SW#2 POST#4	M3*6		6	PCS
*	*	*	*	*	*	*	U670S009H02	NUT, BIND POST	M3		4	PCS
*	*	*	*	*	*	*	L241C069G01	PCB-RCA JACK				PCS
*	*	*	*	*	*	*	U656S164H24	T-SCREW, RCA JACK FIX				PCS
*	*	*	*	*	*	*	L582A011H01	COVER-BACK			2	PCS
*	*	*	*	*	*	*	L582A011H02					PCS
*	*	*	*	*	*	*	L582A011H03					PCS
*	*	*	*	*	*	*	L242Y501H01	POWER-CORD				PCS
*	*	*	*	*	*	*	U242C809H19					PCS
*	*	*	*	*	*	*	L242Y013H01					PCS
*	*	*	*	*	*	*	L242C631H01					PCS
*	*	*	*	*	*	*	L449Y02H01	SOCKET				PCS
*	*	*	*	*	*	*	L840D009H01	COVER-AC SOCKET				PCS
*	*	*	*	*	*	*	L431Y013H01	SW-SLIDE				PCS
*	*	*	*	*	*	*	L431Y016G01					PCS
*	*	*	*	*	*	*	L851D069H01	AC CORD TAG				PCS
*	*	*	*	*	*	*	L851D070H01					PCS
*	*	*	*	*	*	*	L540D501H01	CLAMPER			1	PCS
*	*	*	*	*	*	*	U243C421H10	LEAD	BRN		1	PCS
*	*	*	*	*	*	*	L243C066H28				2	PCS
*	*	*	*	*	*	*	U053S271H05	SOLDER-RESIN			1.6	PCS
*	*	*	*	*	*	*	U053S271H05				0.4	PCS
*	*	*	*	*	*	*	L703D027H01	SW FIX PLATE			1	PCS
*	*	*	*	*	*	*	L851B004H08	LABEL-DBP			1	PCS
*	*	*	*	*	*	*	L452C001G01	TERMINAL-SP			1	PCS
*	*	*	*	*	*	*	L452C001G02				1	PCS
*	*	*	*	*	*	*	L241A039H13	PCB-AMP, POST USE				PCS
*	*	*	*	*	*	*	L704C013H01	HAND-POST				PCS
*	*	*	*	*	*	*	L704C013H02					PCS
*	*	*	*	*	*	*	L704C013H04					PCS
*	*	*	*	*	*	*	L541B018H01	HOLDER-POST				PCS
*	*	*	*	*	*	*	L685C001H01	POST				PCS
*	*	*	*	*	*	*	L685C002H01	HAND-POST				PCS
*	*	*	*	*	*	*	L680C006H01	WASHER-POST				PCS
*	*	*	*	*	*	*	U670S003H02	NUT				PCS
*	*	*	*	*	*	*	L241C066H01	PCB-SUB				PCS
*	*	*	*	*	*	*	L241C068H11	RCA JACK	M3		1	PCS
*	*	*	*	*	*	*	L440Y016H01	JACK-RCA			1	PCS
*	*	*	*	*	*	*	L242C096H26	LEAD-SHIELD			1	PCS

FR		GP	UK	EU	AS	SA	PARTS NUMBER		DESCRIPTION	SPECIFICATION	Q'TY	UNIT
US	CN	WG	EP	UT	JP							
*	*	*	*	*	*	*	U656S263H23	TR FIXION SMALL HEAT SINK)2-3*6				PCS
*	*	*	*	*	*	*	L242C072H25	LEAD-SHIELD, RD				PCS
*	*	*	*	*	*	*	L243C299H05	SOFT CLIPPING				PCS
*	*	*	*	*	*	*	L243C299H08	LEAD	WHT		1	PCS
*	*	*	*	*	*	*	U070S670H10	SWGS-JL			0.5	M
*	*	*	*	*	*	*	L431Y014H01	SW-SLIDE				PCS
*	*	*	*	*	*	*	U053S271H04	SOLDER-RESIN			13	G
*	*	*	*	*	*	*	U243D200H01	W314, 315, 316, 317, 318, 319	LEAD-JP, L:10		0.3	M
*	*	*	*	*	*	*	U243D200H01	W320, 321, 322, 323, 324, 325	L:10		0.3	M
*	*	*	*	*	*	*	U243D200H01	W326, 327, 328, 329, 330, 331	L:10		0.3	M
*	*	*	*	*	*	*	U243D200H01	W332, 333, 334, 335, 336, 337	L:10		0.3	M
*	*	*	*	*	*	*	U243D200H01	W338, 340, 341, 342, 345, 346	L:10		0.3	M
*	*	*	*	*	*	*	U243D200H01	W347, W238, W252	L:10		0.15	M
*	*	*	*	*	*	*	L103Y214H52	R-CARBON, R471, 472	1/4W 1-J		2	PCS
*	*	*	*	*	*	*	L103Y214H64	R425, 426, 427, 428, 429, 430	1/4W 18-J		6	PCS
*	*	*	*	*	*	*	L103Y214H64	R431 R432	1/4W 18-J		2	PCS
*	*	*	*	*	*	*	L103Y214H64	R457 R458	1/4W 10-J		2	PCS
*	*	*	*	*	*	*	L103Y214H06	R411 R414	1/4W 68-J		2	PCS
*	*	*	*	*	*	*	L103Y214H07	R477 R478 R479 R480	1/4W 100-J		4	PCS
*	*	*	*	*	*	*	L103Y214H11	R443 R444	1/4W 220-J		2	PCS
*	*	*	*	*	*	*	L103Y214H13	R459 R460	1/4W 330-J		2	PCS
*	*	*	*	*	*	*	L103Y214H15	R481 R482 R483 R484	1/4W 470-J		2	PCS
*	*	*	*	*	*	*	L103Y214H16	R453 R454	1/4W 560-J		2	PCS
*	*	*	*	*	*	*	L103Y214H17	R433 R434 R437 R438	1/4W 680-J		4	PCS
*	*	*	*	*	*	*	L103Y214H19	R456 R455	1/4W 1K-J		2	PCS
*	*	*	*	*	*	*	L103Y214H20	R435 R436 R439 R440	1/4W 1K-J		4	PCS
*	*	*	*	*	*	*	L103Y214H21	R417 R418 R419 R420	1/4W 1.2K-J		4	PCS
*	*	*	*	*	*	*	L103Y214H23	R407 R408 R409 R410	1/4W 1.5K-J		4	PCS
*	*	*	*	*	*	*	L103Y214H24	R452	1/4W 2.2K-J		4	PCS
*	*	*	*	*	*	*	L103Y214H28	R515 R516	1/4W 2.7K-J		1	PCS
*	*	*	*	*	*	*	L103Y214H33	R489, 490, 491, 492, 493, 494	1/4W 5.6K-J		2	PCS
*	*	*	*	*	*	*	L103Y214H38	R405 R406	1/4W 15K-J		6	PCS
*	*	*	*	*	*	*	L103Y214H39	R-CARBON, R411, 412, 415, 446	1/4W 39K-J		4	PCS
*	*	*	*	*	*	*	L103Y214H47	R401 R402	1/4W 47K-J		2	PCS
*	*	*	*	*	*	*	L103Y214H48	R517 R518	1/4W 220K-J		2	PCS
*	*	*	*	*	*	*	L103Y214H92	R415 R416 R421 R422	1/4W 440-J		2	PCS
*	*	*	*	*	*	*	L264Y220H01	D401, 402, 403, 404, 435, 436	DIODE, 1N4148		6	PCS
*	*	*	*	*	*	*	L140Y306H01	D415, 416, 425, 426, 427, 428			2	PCS
*	*	*	*	*	*	*	L140Y306H10	C-CERAMIC, C407 C408			2	PCS
*	*	*	*	*	*	*	L140Y203H19	C417 C418 C419 C420	50V 22J		4	PCS
*	*	*	*	*	*	*	L140Y203H35	C437 C438 C439 C440	50V 101J		4	PCS
*	*	*	*	*	*	*	L140Y203H35	C449 C450 C451 C452	50V 101J		4	PCS
*	*	*	*	*	*	*	L150Y308H47	C433 C434 C435 C436	50V 331J		4	PCS
*	*	*	*	*	*	*	L150Y308H47	C441 C442 C443 C444	50V 331J		4	PCS
*	*	*	*	*	*	*	L140Y203H15	C425 C426 C423 C424	50V 15J		4	PCS
*	*	*	*	*	*	*	L140Y306H45	C501 C502 C503 C504	50V 223Z		4	PCS
*	*	*	*	*	*	*	L140Y306H45	C507 C508	50V 473Z		2	PCS
*	*	*	*	*	*	*	L140Y201H25	C445 C446 C447 C448	25V 104K		4	PCS
*	*	*	*	*	*	*	L172Y306H02	C-POLY, C405 C406	50V 122J		2	PCS

PICKING DIAGRAM



2240PE PACKING LIST

ITEM	NUMBER	NAME	Q'TY
1	L831D002H01	Bag-Poly	1
2	L800D003H05	Carton Individual	1
3	L813A006H01	Styro Packing	2
4	L871B003H75	Instruction	1
	OR L871B004H42	Instruction, WG only	

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