

TITLE **NAV-5 DUAL (518/490) RECEIVER PCB ASSY**
 DOC REF **PLT02121.XLS**
 DWG REF
 DATE **11/04/2002**

APPROVED ISSUE DATE MOD
 CJM 6 03/03/2003 1356
 CJM 7 22/07/2004 C2881

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ITEM	QTY	REFERENCE	MFRs PART No	MFR	DESCRIPTION	PITCH	PACKAGE
1	6	C104,110,111,112,113,116			CAPACITOR, MULTI CER, 10n, X7R, 50V		0603
2	37	C103,106,200,202,203,206, C209,213,215,216,224,225, C226,234,235,236,238,249, C252,302,303,306,309,313, C315,316,324,325,326,334, C335,336,338,349,352,501, C513			CAPACITOR, MULTI CER, 100n, X7R, 25V		0805
3	1	C102			CAPACITOR, MULTI CER, 100n, X7R, 50V		1206
4	15	C100,127,212,223,237,239, C250,251,253,312,323,337, C339,350,351	EEVFC1H1R0R	PANASONIC	CAPACITOR, AL SMD, 1u, 50V, CASE B		SM_ELEC_4
5	3	C101,107,114	EEVFC1H100P	PANASONIC	CAPACITOR, AL SMD, 10u, 50V, CASE D		SM_ELEC_6.3
6	2	C205,305			CAPACITOR, MULTI CER, 330p, X7R, 16V		0603
7	2	C204,304			CAPACITOR, MULTI CER, 220p, X7R, 16V		0603
8	2	C208,308	TZBX4 series	MURATA	8p5-40p TRIM CAP		
9	28	C201,210,211,214,217,218, C221,227,230,232,233,242, C243,245,301,310,311,314, C317,318,327,332,333,321, C330,342,343,345			CAPACITOR, CERAMIC NP0, 10n, 25V, 5%		1206
10	8	C220,229,241,244,320,329, C341,344			CAPACITOR, CERAMIC NP0, 2n7, 25V, 5%		1206
11	4	C219,228,319,328			CAPACITOR, CERAMIC NP0, 8n2, 25V, 5%		1206
12	10	C109,117,118,119,222,231, C240,322,331,340	EEVFC1C470R	PANASONIC	CAPACITOR, AL SMD, 47u, 16V CASE D		SM_ELEC_6.3
13	2	C108,115	ECA1HM471	PANASONIC	CAPACITOR, ELECT., 470uF 50V	5mm	
14	6	C502,503,504,506,509,512			CAPACITOR, MULTI CER, 150p, COG, 25V		0805
15	2	C507,508			CAPACITOR, MULTI CER, 1800p, COG, 25V		1206
16	2	C510,511			CAPACITOR, MULTI CER, 4700p, COG, 25V		1206
57	1	C002			CAPACITOR, MULTI CER, 1uF, Z5U, 25V		1206
58	1	C307			CAPACITOR, MULTI CER, 18p, COG, 25V		0603
61	2	C254,300			CAPACITOR, MULTI CER, 1n, X7R 50V		0603

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17	1	D101	GF1A	GEN SEMI	DIODE, GF1A		DO-214BA
18	4	D200,201,300,301	BAV99		DIODE, BAV99		SOT-23
19	4	D500,501,502,503	BAS16		DIODE, BAS16		SOT-23
20	1	L100	RN102-0.3/0.2	SCHAFFNER	COMMON MODE CHOKE		
21	1	L500	NL252018T100J	TDK	INDUCTOR, 10uH		1210
22	2	L503,506	RZCS-45330R	TOKO	TRANSFORMER, PRI 15, SEC1 82, SEC 2 60		
23	4	L501,502,504,505	RZCS-45329R	TOKO	TRANSFORMER, PRI 6, SEC1 82, SEC 2 60		
24	2	Q200,300	BC847B		TRANSISTOR, NPN		SOT-23
25	4	R200,201,300,301			RESISTOR, 3k3		0603
26	4	R109,110,111,114			RESISTOR, 47k		0603
27	2	R204,304			RESISTOR, 1k		0603
28	8	R104,105,106,107,228,229, R328,329			RESISTOR, 10k		0603
29	4	R205,206,305,306			RESISTOR, 47k		0603
30	8	R203,207,211,220,303,307, R311,320			RESISTOR, 2k4		0603
31	8	R208,214,221,222,308,314, R321,322			RESISTOR, 120K		0603
32	4	R210,213,310,313			RESISTOR, 22k		0805
33	20	R215,216,217,223,224,225, R234,235,236,237,315,316, R317,323,324,325,334,335, R336,337			RESISTOR, 130k		0603
34	3	R212,312,500			RESISTOR, 10R		0805
35	7	R202,209,232,240,302,309, R332			RESISTOR, 100R		0805
36	2	R241,341			RESISTOR, 1K		0805
37	4	R218,244,318,344			RESISTOR, 10K		0805
38	4	R242,243,342,343			RESISTOR, 1Meg		0603
39	4	R219,227,319,327			RESISTOR, 1Meg2		0603

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40	4	R226,230,326,330			RESISTOR, 1Meg8		0603
41	4	R231,233,331,333			RESISTOR, 6Meg8		0603
42	1	R100			RESISTOR, 2k		0603
43	2	R103,108			RESISTOR, 330R		0603
59	1	R001			RESISTOR, 2M2		1206
60	1	R102			RESISTOR, 0R0		0805
44	1	J1	FLS14-10-T	FLAIR	CONNECTOR, 10 WAY ST PIN LOCKING HEADER	0.1"	
45	2	J4,5	FLS14-2-T	FLAIR	CONNECTOR, 2 WAY ST PIN LOCKING HEADER	0.1"	
46	4	U204,205,304,305	74HC74D	PHILIPS	IC, DUAL D-TYPE FLIP-FLOP, 74HC74		SO-14
47	1	U100	LM317HVT	NAT SEMI	IC,ADJUSTABLE REGULATOR, LM317		T0-220
48	1	U101	LM317T	NAT SEMI	IC,ADJUSTABLE REGULATOR, LM317		T0-220
49	1	U102	LM339AM	NAT SEMI	IC, QUAD COMPARATOR, LM339AM		SO-14
50	4	U203,206,303,306	TL074	TI	IC, OP-AMP, QUAD, TL074		SO-14
51	2	U200,300	MAX4252	MAXIM	IC, OP-AMP MAX4252		SO-8
52	4	U201,202,301,302	SA602AD	PHILIPS	IC, DOUBLE BALANCED MIXER SA602A		SO-8
53	1	U307	TLO72	TI	IC, OP-AMP, DUAL, TL072		SO-8
54	1	Y200			4.144MHz, HC49, 20ppm tol, 10ppm/C tempCo, 30pF, -25 to +85 degC		HC49
55	1	Y300			3.920MHz, HC49, 20ppm tol, 10ppm/C tempCo, 30pF, -25 to +85 degC		HC49
56	1		2121.PCB		PCB, NAV-5 DUAL RECEIVER, ISSUE 4		



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1	6	C104,110,111,112,113,116			CAPACITOR, MULTI CER, 10n, X7R, 50V		0603	Chgd @ Iss. 7
2	37	C103,106,200,202,203,206, C209,213,215,216,224,225, C226,234,235,236,238,249, C252,302,303,306,309,313, C315,316,324,325,326,334, C335,336,338,349,352,501, C513			CAPACITOR, MULTI CER, 100n, X7R, 25V		0805	
3	1	C102			CAPACITOR, MULTI CER, 100n, X7R, 50V		1206	
4	15	C100,127,212,223,237,239, C250,251,253,312,323,337, C339,350,351	EEVFC1H1R0R	PANASONIC	CAPACITOR, AL SMD, 1u, 50V, CASE B		SM_ELEC_4	
5	3	C101,107,114	EEVFC1H100P	PANASONIC	CAPACITOR, AL SMD, 10u, 50V, CASE D		SM_ELEC_6.3	
6	2	C205,305			CAPACITOR, MULTI CER, 330p, X7R, 16V		0603	
7	2	C204,304			CAPACITOR, MULTI CER, 220p, X7R, 16V		0603	
8	2	C208,308	TZBX4 series	MURATA	8p5-40p TRIM CAP			
9	28	C201,210,211,214,217,218, C221,227,230,232,233,242, C243,245,301,310,311,314, C317,318,327,332,333,321, C330,342,343,345			CAPACITOR, CERAMIC NP0, 10n, 25V, 5%		1206	
10	8	C220,229,241,244,320,329, C341,344			CAPACITOR, CERAMIC NP0, 2n7, 25V, 5%		1206	
11	4	C219,228,319,328			CAPACITOR, CERAMIC NP0, 8n2, 25V, 5%		1206	
12	10	C109,117,118,119,222,231, C240,322,331,340	EEVFC1C470R	PANASONIC	CAPACITOR, AL SMD, 47u, 16V CASE D		SM_ELEC_6.3	
13	2	C108,115	ECA1HM471	PANASONIC	CAPACITOR, ELECT., 470uF 50V	5mm		MAX DIA = 10mm, HEIGHT = 20mm
14	6	C502,503,504,506,509,512			CAPACITOR, MULTI CER, 150p, COG, 25V		0805	RS 211-3158
15	2	C507,508			CAPACITOR, MULTI CER, 1800p, COG, 25V		1206	FAR 718-592
16	2	C510,511			CAPACITOR, MULTI CER, 4700p, COG, 25V		1206	FAR 718-592
57	1	C002			CAPACITOR, MULTI CER, 1uF, Z5U, 25V		1206	
58	1	C307			CAPACITOR, MULTI CER, 18p, COG, 25V		0603	
61	2	C254,300			CAPACITOR, MULTI CER, 1n, X7R 50V		0603	Chgd @ Iss. 7



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19	4	D500,501,502,503	BAS16		DIODE, BAS16		SOT-23	
20	1	L100	RN102-0.3/0.2	SCHAFFNER	COMMON MODE CHOKE			
21	1	L500	NL252018T100J	TDK	INDUCTOR, 10uH		1210	
22	2	L503,506	RZCS-45330R	TOKO	TRANSFORMER, PRI 15, SEC1 82, SEC 2 60			CUT OUT CAPACITORS
23	4	L501,502,504,505	RZCS-45329R	TOKO	TRANSFORMER, PRI 6, SEC1 82, SEC 2 60			CUT OUT CAPACITORS
24	2	Q200,300	BC847B		TRANSISTOR, NPN		SOT-23	
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27	2	R204,304			RESISTOR, 1k		0603	
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32	4	R210,213,310,313			RESISTOR, 22k		0805	Chgd @ Iss. 7
33	20	R215,216,217,223,224,225, R234,235,236,237,315,316, R317,323,324,325,334,335, R336,337			RESISTOR, 130k		0603	
34	3	R212,312,500			RESISTOR, 10R		0805	
35	7	R202,209,232,240,302,309, R332			RESISTOR, 100R		0805	
36	2	R241,341			RESISTOR, 1K		0805	
37	4	R218,244,318,344			RESISTOR, 10K		0805	
38	4	R242,243,342,343			RESISTOR, 1Meg		0603	
39	4	R219,227,319,327			RESISTOR, 1Meg2		0603	



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43	2	R103,108			RESISTOR, 330R		0603	
59	1	R001			RESISTOR, 2M2		1206	Chgd @ Iss. 7
60	1	R102			RESISTOR, 0R0		0805	
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45	2	J4,5	FLS14-2-T	FLAIR	CONNECTOR, 2 WAY ST PIN LOCKING HEADER	0.1"		
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47	1	U100	LM317HVT	NAT SEMI	IC,ADJUSTABLE REGULATOR, LM317		T0-220	
48	1	U101	LM317T	NAT SEMI	IC,ADJUSTABLE REGULATOR, LM317		T0-220	LM317HVT
49	1	U102	LM339AM	NAT SEMI	IC, QUAD COMPARATOR, LM339AM		SO-14	
50	4	U203,206,303,306	TL074	TI	IC, OP-AMP, QUAD, TL074		SO-14	
51	2	U200,300	MAX4252	MAXIM	IC, OP-AMP MAX4252		SO-8	
52	4	U201,202,301,302	SA602AD	PHILIPS	IC, DOUBLE BALANCED MIXER SA602A		SO-8	
53	1	U307	TLO72	TI	IC, OP-AMP, DUAL, TL072		SO-8	
54	1	Y200			4.144MHz, HC49, 20ppm tol, 10ppm/C tempCo, 30pF, -25 to +85 degC		HC49	
55	1	Y300			3.920MHz, HC49, 20ppm tol, 10ppm/C tempCo, 30pF, -25 to +85 degC		HC49	
56	1		2121.PCB		PCB, NAV-5 DUAL RECEIVER, ISSUE 4			Chgd @ Iss. 7