

SERVICE MANUAL

ADDITIONAL INFORMATION ON MODEL QX-949

Subject: SUB-CHANNEL CIRCUIT ASSEMBLY OF MODEL QX-949

On account of modification due to improvement, conventional Assembly
AWX-051-A will be replaced by a new type of Assembly AWX-051-B.

Notice:

- (1) Old Assembly and New One are mutually interchangeable.
- (2) You are requested to make use of this additional information together with the furnished service manual.

Parts List of Sub-Channel Circuit Assembly (AWX-051-B)

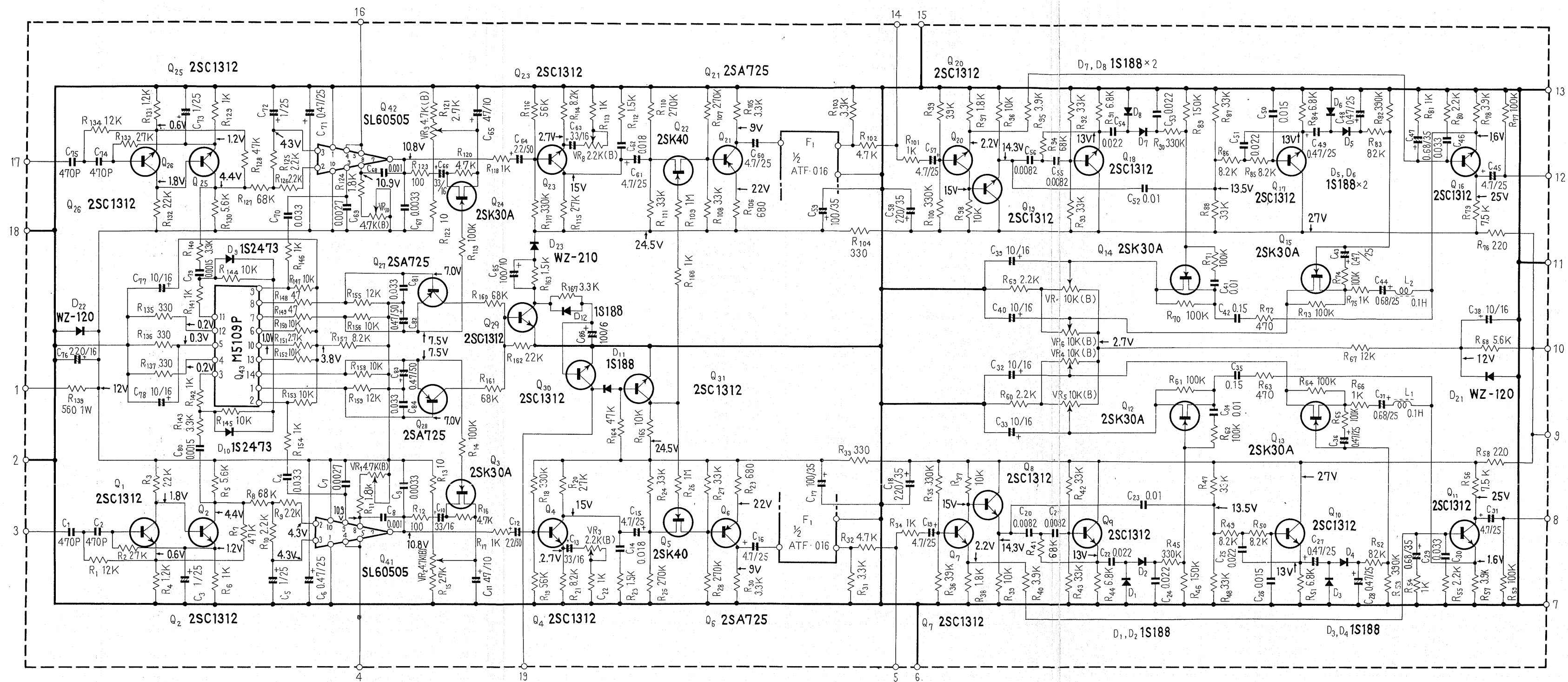
CAPACITORS

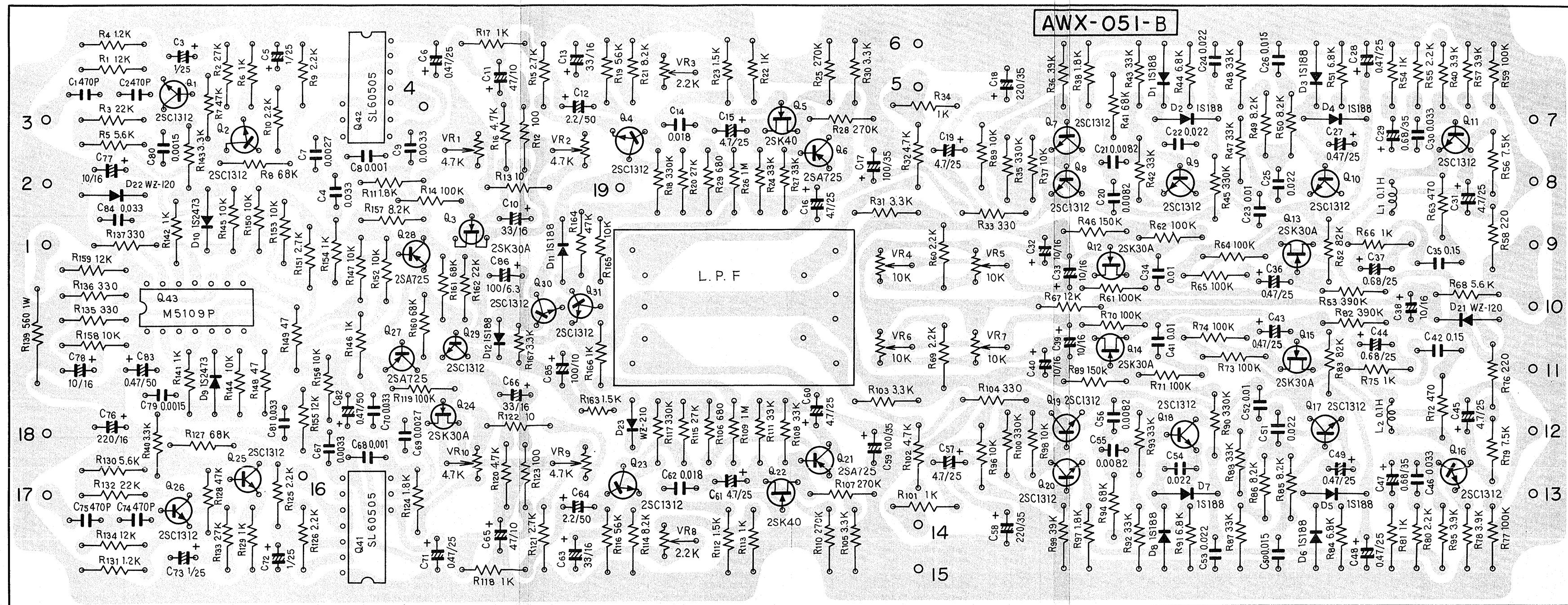
Symbol	Description			Part No.
C1	Ceramic	470p	50V	CKDYB 471K 50
C2	Ceramic	470p	50V	CKDYB 471K 50
C3	Electrolytic	1	25V	CEA 010P 25
C4	Mylar	0.033	50V	CQMA 333K 50
C5	Electrolytic	1	25V	CEA 010P 25
C6	Electrolytic	0.47	25V	CSSA R47M 25
C7	Mylar	0.0027	50V	CQMA 272K 50
C8	Mylar	0.001	50V	CQMA 102K 50
C9	Mylar	0.0033	50V	CQMA 332K 50
C10	Electrolytic	33	16V	CEA 330P 16
C11	Electrolytic	47	10V	CEA 471P 10
C12	Electrolytic	2.2	50V	CEA 2R2P 50
C13	Electrolytic	33	16V	CEA 330P 16
C14	Mylar	0.018	50V	CQMA 183K 50
C15	Electrolytic	4.7	25V	CEA 4R7P 25
C16	Electrolytic	4.7	25	CEA 4R7P 25
C17	Electrolytic	100	35V	CEA 101P 35
C18	Electrolytic	220	35V	CEA 221P 35
C19	Electrolytic	4.7	25V	CEA 4R7P 25
C20	Mylar	0.0082	50V	CQMA 822K 50
C21	Mylar	0.0082	50V	CQMA 822K 50
C22	Mylar	0.022	50V	CQMA 223K 50
C23	Mylar	0.01	50V	CQMA 103K 50
C24	Mylar	0.022	50V	CQMA 223K 50
C25	Mylar	0.022	50V	CQMA 223K 50
C26	Mylar	0.015	50V	CQMA 153K 50
C27	Electrolytic	0.47	25V	CSSA R47M 25
C28	Electrolytic	0.47	25V	CSSA R47M 25
C29	Electrolytic	0.68	35V	CSZA R68K 35
C30	Mylar	0.033	50V	CQMA 333K 50
C31	Electrolytic	4.7	25V	CEA 4R7P 25
C32	Electrolytic	10	16V	CEA 100P 16
C33	Electrolytic	10	16V	CEA 100P 16
C34	Mylar	0.01	50V	CQMA 103K 50
C35	Mylar	0.15	50V	CQMA 154K 50
C36	Electrolytic	0.47	25V	CSSA R47M 25
C37	Electrolytic	0.68	25V	CSSA R68M 25
C38	Electrolytic	10	16V	CEA 100P 16
C39	Electrolytic	10	16V	CEA 100P 16
C40	Electrolytic	10	16V	CEA 100P 16
C41	Mylar	0.01	50V	CQMA 103K 50
C42	Mylar	0.15	50V	CQMA 154K 50
C43	Electrolytic	0.47	25V	CSSA R47M 25
C44	Electrolytic	0.68	25V	CSSA R68M 25
C45	Electrolytic	4.7	25V	CEA 4R7P 25

Symbol	Description			Part No.	
C46	Mylar	0.033	50V	CQMA 333K 50	
C47	Electrolytic	0.68	35V	CSZA R68K 35	
C48	Electrolytic	0.47	25V	CSSA R47M 25	
C49	Electrolytic	0.47	25V	CSSA R47M 25	
C50	Mylar	0.015	50V	CQMA 153K 50	
C51	Mylar	0.022	50V	CQMA 223K 50	
C52	Mylar	0.01	50V	CQMA 103K 50	
C53	Mylar	0.022	50V	CQMA 223K 50	
C54	Mylar	0.022	50V	CQMA 223K 50	
C55	Mylar	0.0082	50V	CQMA 822K 50	
C56	Mylar	0.0082	50V	CQMA 822K 50	
C57	Electrolytic	4.7	25V	CEA 4R7P 25	
C58	Electrolytic	220	35V	CEA 221P 35	
C59	Electrolytic	100	35V	CEA 101P 35	
C60	Electrolytic	4.7	25V	CEA 4R7P 25	
C61	Electrolytic	4.7	25V	CEA 4R7P 25	
C62	Mylar	0.018	50V	CQMA 183K 50	
C63	Electrolytic	33	16V	CEA 330P 16	
C64	Electrolytic	2.2	50V	CEA 2R2P 50	
C65	Electrolytic	47	10V	CEA 471P 10	
C66	Electrolytic	33	16V	CEA 330P 16	
C67	Mylar	0.0033	50V	CQMA 332K 50	
C68	Mylar	0.001	50V	CQMA 102K 50	
C69	Mylar	0.0027	50V	CQMA 272K 50	
C70	Mylar	0.033	50V	CQMA 333K 50	
C71	Electrolytic	0.47	25V	CSSA R47M 25	
C72	Electrolytic	1	25V	CEA 010P 25	
C73	Electrolytic	1	25V	CEA 010P 25	
C74	Ceramic	470p	50V	CKDYB 471K 50	
C75	Ceramic	470p	50V	CKDYB 471K 50	
C76	Electrolytic	220	16V	CEA 221P 16	
C77	Electrolytic	10	16V	CEA 100P 16	
C78	Electrolytic	10	16V	CEA 100P 16	
C79	Mylar	0.0015	50V	CQMA 152K 50	
C80	Mylar	0.0015	50V	CQMA 152K 50	
C81	Mylar	0.033	50V	CQMA 333K 50	
C82	Electrolytic	0.47	50V	CEA R47P 50	
C83	Electrolytic	0.47	50V	CEA R47P 50	
C84	Mylar	0.033	50V	CQMA 333K 50	
C85	Electrolytic	100	10V	CEA 101P 10	
C86	Electrolytic	100	6V	CEA 101P 6	

RESISTORS

Symbol	Description	Part No.
R1	Carbon film 12k	RD%PM 123J
R2	Carbon film 27k	RD%PM 273J
R3	Carbon film 22k	RD%PM 223J
R4	Carbon film 1.2k	RD%PM 122J
R5	Carbon film 5.6k	RD%PM 562J
R6	Carbon film 1k	RD%PM 102J
R7	Carbon film 47k	RD%PM 473J
R8	Carbon film 68k	RD%PM 683J
R9	Carbon film 2.2k	RD%PM 222J
R10	Carbon film 2.2k	RD%PM 222J
R11	Carbon film 1.8k	RD%PM 182J
R12	Carbon film 100	RD%PM 101J
R13	Carbon film 10	RD%PM 100J
R14	Carbon film 100k	RD%PM 104J
R15	Carbon film 2.7k	RD%PM 272J
R16	Carbon film 4.7k	RD%PM 472J
R17	Carbon film 1k	RD%PM 102J
R18	Carbon film 330k	RD%PM 334J
R19	Carbon film 56k	RD%PM 563J
R20	Carbon film 27k	RD%PM 273J
R21	Carbon film 8.2k	RD%PM 822J
R22	Carbon film 1k	RD%PM 102J
R23	Carbon film 1.5k	RD%PM 152J
R24	Carbon film 33k	RD%PM 333J
R25	Carbon film 270k	RD%PM 274J
R26	Carbon film 1M	RD%PM 105J
R27	Carbon film 33k	RD%PM 333J
R28	Carbon film 270k	RD%PM 274J
R29	Carbon film 680	RD%PM 681J
R30	Carbon film 3.3k	RD%PM 332J
R31	Carbon film 3.3k	RD%PM 332J
R32	Carbon film 4.7k	RD%PM 472J
R33	Carbon film 330	RD%PM 331J
R34	Carbon film 1k	RD%PM 102J
R35	Carbon film 330k	RD%PM 334J
R36	Carbon film 39k	RD%PM 393J
R37	Carbon film 10k	RD%PM 103J
R38	Carbon film 1.8k	RD%PM 182J
R39	Carbon film 10k	RD%PM 103J
R40	Carbon film 3.9k	RD%PM 392J
R41	Carbon film 68k	RD%PM 683J
R42	Carbon film 33k	RD%PM 333J
R43	Carbon film 33k	RD%PM 333J
R44	Carbon film 6.8k	RD%PM 682J
R45	Carbon film 330k	RD%PM 334J
R46	Carbon film 150k	RD%PM 154J
R47	Carbon film 33k	RD%PM 333J
R48	Carbon film 33k	RD%PM 333J
R49	Carbon film 8.2k	RD%PM 822J
R50	Carbon film 8.2k	RD%PM 822J





Symbol	Description		Part No.	
R51	Carbon film	6.8k	RD¼PM 682J	
R52	Carbon film	82k	RD¼PM 823J	
R53	Carbon film	390k	RD¼PM 394J	
R54	Carbon film	1k	RD¼PM 102J	
R55	Carbon film	2.2k	RD¼PM 222J	
R56	Carbon film	7.5k	RD¼PM 752J	
R57	Carbon film	3.9k	RD¼PM 392J	
R58	Carbon film	220	RD¼PM 221J	
R59	Carbon film	100k	RD¼PM 104J	
R60	Carbon film	2.2k	RD¼PM 222J	
R61	Carbon film	100k	RD¼PM 104J	
R62	Carbon film	100k	RD¼PM 104J	
R63	Carbon film	470	RD¼PM 471J	
R64	Carbon film	100k	RD¼PM 104J	
R65	Carbon film	100k	RD¼PM 104J	
R66	Carbon film	1k	RD¼PM 102J	
R67	Carbon film	12k	RD¼PM 123J	
R68	Carbon film	5.6k	RD¼PM 562J	
R69	Carbon film	2.2k	RD¼PM 222J	
R70	Carbon film	100k	RD¼PM 104J	
R71	Carbon film	100k	RD¼PM 104J	
R72	Carbon film	470	RD¼PM 471J	
R73	Carbon film	100k	RD¼PM 104J	
R74	Carbon film	100k	RD¼PM 104J	
R75	Carbon film	1k	RD¼PM 102J	
R76	Carbon film	220	RD¼PM 221J	
R77	Carbon film	100k	RD¼PM 104J	
R78	Carbon film	3.9k	RD¼PM 392J	
R79	Carbon film	7.5k	RD¼PM 752J	
R80	Carbon film	2.2k	RD¼PM 222J	
R81	Carbon film	1k	RD¼PM 102J	
R82	Carbon film	390k	RD¼PM 394J	
R83	Carbon film	82k	RD¼PM 823J	
R84	Carbon film	6.8k	RD¼PM 682J	
R85	Carbon film	8.2k	RD¼PM 822J	
R86	Carbon film	8.2k	RD¼PM 822J	
R87	Carbon film	33k	RD¼PM 333J	
R88	Carbon film	33k	RD¼PM 333J	
R89	Carbon film	150k	RD¼PM 154J	
R90	Carbon film	330k	RD¼PM 334J	
R91	Carbon film	6.8k	RD¼PM 682J	
R92	Carbon film	33k	RD¼PM 333J	
R93	Carbon film	33k	RD¼PM 333J	
R94	Carbon film	68k	RD¼PM 683J	
R95	Carbon film	3.9k	RD¼PM 392J	
R96	Carbon film	10k	RD¼PM 103J	
R97	Carbon film	1.8k	RD¼PM 182J	
R98	Carbon film	10k	RD¼PM 103J	
R99	Carbon film	39k	RD¼PM 393J	
R100	Carbon film	330k	RD¼PM 334J	

Symbol	Description			Part No.	
R101	Carbon film	1k		RD¼PM 102J	
R102	Carbon film	4.7k		RD¼PM 472J	
R103	Carbon film	3.3k		RD¼PM 332J	
R104	Carbon film	330		RD¼PM 331J	
R105	Carbon film	3.3k		RD¼PM 332J	
R106	Carbon film	680		RD¼PM 681J	
R107	Carbon film	270k		RD¼PM 274J	
R108	Carbon film	33k		RD¼PM 333J	
R109	Carbon film	1M		RD¼PM 105J	
R110	Carbon film	270k		RD¼PM 274J	
R111	Carbon film	33k		RD¼PM 333J	
R112	Carbon film	1.5k		RD¼PM 152J	
R113	Carbon film	1k		RD¼PM 102J	
R114	Carbon film	8.2k		RD¼PM 822J	
R115	Carbon film	27k		RD¼PM 273J	
R116	Carbon film	56k		RD¼PM 563J	
R117	Carbon film	330k		RD¼PM 334J	
R118	Carbon film	1k		RD¼PM 102J	
R119	Carbon film	100k		RD¼PM 104J	
R120	Carbon film	4.7k		RD¼PM 472J	
R121	Carbon film	2.7k		RD¼PM 272J	
R122	Carbon film	10		RD¼PM 100J	
R123	Carbon film	100		RD¼PM 101J	
R124	Carbon film	1.8k		RD¼PM 182J	
R125	Carbon film	2.2k		RD¼PM 222J	
R126	Carbon film	2.2k		RD¼PM 222J	
R127	Carbon film	68k		RD¼PM 683J	
R128	Carbon film	47k		RD¼PM 473J	
R129	Carbon film	1k		RD¼PM 102J	
R130	Carbon film	5.6k		RD¼PM 562J	
R131	Carbon film	1.2k		RD¼PM 122J	
R132	Carbon film	22k		RD¼PM 223J	
R133	Carbon film	27k		RD¼PM 273J	
R134	Carbon film	12k		RD¼PM 123J	
R135	Carbon film	330		RD¼PM 331J	
R136	Carbon film	330		RD¼PM 331J	
R137	Carbon film	330		RD¼PM 331J	
R138					
R139	Metal oxide	560	1W	RS1P 561J	
R140	Carbon film	3.3k		RD¼PM 332J	
R141	Carbon film	1k		RD¼PM 102J	
R142	Carbon film	1k		RD¼PM 102J	
R143	Carbon film	3.3k		RD¼PM 332J	
R144	Carbon film	10k		RD¼PM 103J	
R145	Carbon film	10k		RD¼PM 103J	
R146	Carbon film	1k		RD¼PM 102J	
R147	Carbon film	10k		RD¼PM 103J	
R148	Carbon film	47		RD¼PM 470J	
R149	Carbon film	47		RD¼PM 470J	
R150	Carbon film	10k		RD¼PM 103J	

Symbol	Description		Part No.	
R151	Carbon film	2.7k	RD¼PM 272J	
R152	Carbon film	10k	RD¼PM 103J	
R153	Carbon film	10k	RD¼PM 103J	
R154	Carbon film	1k	RD¼PM 102J	
R155	Carbon film	12k	RD¼PM 123J	
R156	Carbon film	10k	RD¼PM 103J	
R157	Carbon film	8.2k	RD¼PM 822J	
R158	Carbon film	10k	RD¼PM 103J	
R159	Carbon film	12k	RD¼PM 123J	
R160	Carbon film	68k	RD¼PM 683J	
R161	Carbon film	68k	RD¼PM 683J	
R162	Carbon film	22k	RD¼PM 223J	
R163	Carbon film	1.5k	RD¼PM 152J	
R164	Carbon film	47k	RD¼PM 473J	
R165	Carbon film	10k	RD¼PM 103J	
R166	Carbon film	1k	RD¼PM 102J	
R167	Carbon film	3.3k	RD¼PM 332J	

POTENTIOMETERS

Symbol	Description		Part No.	
VR1	Semi-fixed	4.7k-B	C92-051-0	
VR2	Semi-fixed	4.7k-B	C92-051-0	
VR3	Semi-fixed	2.2k-B	ACP-001-0	
VR4	Semi-fixed	10k-B	C92-049-0	
VR5	Semi-fixed	10k-B	C92-049-0	
VR6	Semi-fixed	10k-B	C92-049-0	
VR7	Semi-fixed	10k-B	C92-049-0	
VR8	Semi-fixed	2.2k-B	ACP-001-0	
VR9	Semi-fixed	4.7k-B	C92-051-0	
VR10	Semi-fixed	4.7k-B	C92-051-0	

SEMICONDUCTORS

Symbol	Description		Part No.	
Q1	2SC1327-T, S or U (2SC1312-F, G or H) (2SC1344-D, E or F)	Transistor		
Q2	2SC1327-T, S or U (2SC1312-F, G or H) (2SC1344-D, E or F)	Transistor		
Q3	2SK30A-Y or GR (2SK30AD)	FET		
Q4	2SC1327-T, S or U (2SC1312-F, G or H) (2SC1344-D, E or F)	Transistor		
Q5.	2SK40-D or C (2SK30A-Y or GR)	FET		

Symbol	Description	Part No.	
Q6	2SA763P-5 or 6 (2SA725-F or G)	Transistor	
Q7	2SC1327-S or T (2SC1312-F or G) (2SC1344-D or E)	Transistor	
Q8	2SC1327-S or T (2SC1312-F or G) (2SC1344-D or E)	Transistor	
Q9	2SC1327-S or T (2SC1312-F or G) (2SC1344-D or E)	Transistor	
Q10	2SC1327-S or T (2SC1312-F or G) (2SC1344-D or E)	Transistor	
Q11	2SC1327-S or T (2SC1312-F or G) (2SC1344-D or E)	Transistor	
Q12	2SK30A-Y or GR (2SK30AD)	FET	
Q13	2SK30A-GR	FET	
Q14	2SK30A-Y or GR (2SK30AD)	FET	
Q15	2SK30A-Y or GR (2SK30AD)	FET	
Q16	2SC1327-S or T (2SC1312-F or G) (2SC1344-D or E)	Transistor	
Q17	2SC1327-S or T (2SC1312-F or G) (2SC1344-D or E)	Transistor	
Q18	2SC1327-S or T (2SC1312-F or G) (2SC1344-D or E)	Transistor	
Q19	2SC1327-T (2SC1312-F or G) (2SC1344-D or E)	Transistor	
Q20	2SC1327-T (2SC1312-F or G) (2SC1344-D or E)	Transistor	
Q21	2SA763P-5 or 6 (2SA725-F or G)	Transistor	
Q22	2SK40-D or C (2SK30A-Y or GR)	FET	
Q23	2SC1327-T, S or U (2SC1312-F, G or H) (2SC1344-D, E or F)	Transistor	
Q24	2SK30A-GR	FET	
Q25	2SC1327-T, S or U (2SC1312-F, G or H) (2SC1344-D, E or F)	Transistor	

Symbol	Description	Part No.	
Q26	2SC1327-T, S or U (2SC1312-F, G or H) (2SC1344-D, E or F)	Transistor	
Q27	2SA763P-5 or 6 (2SA725-F or G)	Transistor	
Q28	2SA763P-5 or 6 (2SA725-F or G)	Transistor	
Q29	2SC1327-T, S or U (2SC1312-F, G or H) (2SC1344-D, E or F)		
Q30	2SC1327-U (2SC1312-H) (2SC1344-F)	Transistor	
Q31	2SC1327-T, S or U (2SC1312-F, G or H) (2SC1344-D, E or F)	Transistor	
Q41	SL60505 (M51361P)	IC	
Q42	SL60505 (M51361P)	IC	
Q43	M5109P	IC	
D1	1S188 FM-1	Diode	
D2	1S188 FM-1	Diode	
D3	1S188 FM-1	Diode	
D4	1S188 FM-1	Diode	
D5	1S188 FM-1	Diode	
D6	1S188 FM-1	Diode	
D7	1S188 FM-1	Diode	
D8	1S188 FM-1	Diode	
D9	1S2473	Diode	
D10	1S2473	Diode	
D11	1S188 FM-1	Diode	
D12	1S188 FM-1	Diode	
D21	WZ-120	Zener diode	
D22	WZ-120	Zener diode	
D23	WZ-210	Zener diode	

COILS AND FILTER

Symbol	Description	Part No.	
F1	Low pass filter	ATF-016-0	ATF-019-0
L1	Choke coil 104k	ATM-008-0	
L2	Choke coil 104k	ATM-008-0	

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