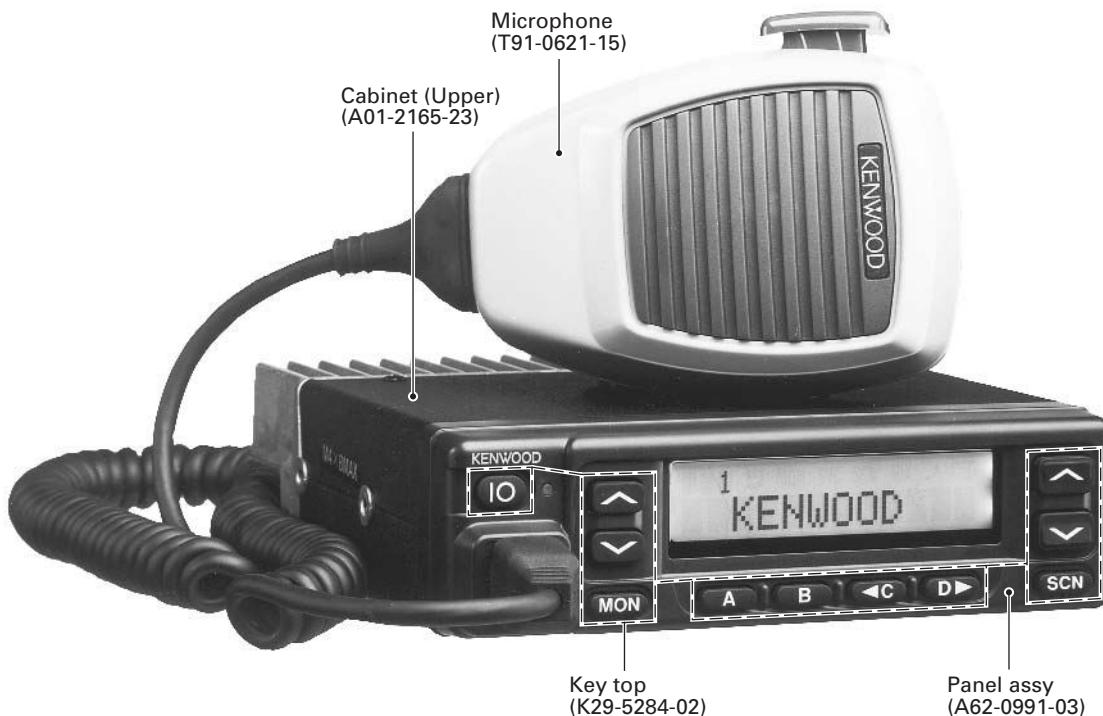


800MHz/900MHz FM TRANSCEIVER
TK-980/981
SERVICE MANUAL
SUPPLEMENT II

KENWOOD

© 2005-1 PRINTED IN JAPAN
B51-8717-00 (N) PDF

This service manual applied product with 50100001 (TK-980), 60600001 (TK-981) or subsequent serial numbers.



CONTENTS

PARTS LIST	2
PC BOARD	
PLL/VCO (X58-453X-XX)	7
TX-RX UNIT (X57-652X-XX) (A/2)	8
SCHEMATIC DIAGRAM	12

PARTS LIST

* New Parts. Δ indicates safety critical components.

Parts without **Parts No.** are not supplied.

Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.

Teile ohne **Parts No.** werden nicht geliefert.

L : Scandinavia

Y : PX (Far East, Hawaii)

K : USA

T : England

P : Canada

E : Europe

Y : AAFES (Europe)

X : Australia

M : Other Areas

TX-RX UNIT (X57-6520-XX)

Ref. No.	Address	New parts	Parts No.	Description			Desti-nation
TX-RX UNIT (X57-652X-XX) 0-10 : TK-980 0-11 : TK-981							
D511		B30-2151-05	LED (RED/GREEN)				
D512-517		B30-2171-05	LED				
C1-15	CC73GCH1H101J	CHIP C	100PF	J			
C16	C92-0628-05	CHIP-TAN	10UF	10WV			
C18	C92-0507-05	CHIP-TAN	4.7UF	6.3WV			
C19	CC73GCH1H100D	CHIP C	10PF	D			
C20-22	CC73GCH1H101J	CHIP C	100PF	J			
C23	C92-0507-05	CHIP-TAN	4.7UF	6.3WV			
C24	CC73GCH1H101J	CHIP C	100PF	J			
C25	C92-0507-05	CHIP-TAN	4.7UF	6.3WV			
C27	CK73GB1H102K	CHIP C	1000PF	K			
C28	CC73GCH1H220J	CHIP C	22PF	J			
C29	C92-0628-05	CHIP-TAN	10UF	10WV			
C30	CK73GB1H102K	CHIP C	1000PF	K			
C31	C92-0628-05	CHIP-TAN	10UF	10WV			
C32	CC73GCH1H100D	CHIP C	10PF	D			
C33	CK73GB1E103K	CHIP C	0.010UF	K			
C34	C92-0568-05	CHIP-TAN	22UF	10WV			
C35	CC73GCH1H101J	CHIP C	100PF	J			
C36	C92-0628-05	CHIP-TAN	10UF	10WV			
C37	C92-1341-05	ELECTRO	100UF	16WV			
C38	C92-0507-05	CHIP-TAN	4.7UF	6.3WV			
C39	CK73GB1E103K	CHIP C	0.010UF	K			
C40	CC73GCH1H101J	CHIP C	100PF	J			
C41	C92-0628-05	CHIP-TAN	10UF	10WV			
C42	C92-0546-05	CHIP-TAN	68UF	6.3WV			
C43,44	CC73GCH1H101J	CHIP C	100PF	J			
C45	C92-0507-05	CHIP-TAN	4.7UF	6.3WV			
C46	C92-0004-05	CHIP-TAN	1.0UF	16WV			
C47	CC73GCH1H101J	CHIP C	100PF	J			
C48	CK73FF1C105Z	CHIP C	1.0UF	Z			
C49	CC73GCH1H101J	CHIP C	100PF	J			
C51	CC73GCH1H101J	CHIP C	100PF	J			
C52	CC73GCH1H100D	CHIP C	10PF	D			
C54	CK73GB1C104K	CHIP C	0.10UF	K			
C55	CC73GCH1H030C	CHIP C	3.0PF	C			
C56	CC73GCH1H101J	CHIP C	100PF	J			
C57	CK73GB1E103K	CHIP C	0.010UF	K			
C58	CC73GCH1H101J	CHIP C	100PF	J			
C59	CC73GCH1H030C	CHIP C	3.0PF	C			
C60	CC73GCH1H101J	CHIP C	100PF	J			
C61	CK73GB1E103K	CHIP C	0.010UF	K			
C62	CC73GCH1H030C	CHIP C	3.0PF	C			
C63	CK73FF1C105Z	CHIP C	1.0UF	Z			
C64	CC73GCH1H101J	CHIP C	100PF	J			
C65	CK73GB1C104K	CHIP C	0.10UF	K			
C66	CK73GB1E103K	CHIP C	0.010UF	K			
C67	CC73GCH1H101J	CHIP C	100PF	J			
C68	CK73GB1C104K	CHIP C	0.10UF	K			
C70	C92-0719-05	ELECTRO	47UF	25WV			
C71	CK73GB1C104K	CHIP C	0.10UF	K			
C72,73	CK73GB1H102K	CHIP C	1000PF	K			
C74	C92-0719-05	ELECTRO	47UF	25WV			

Ref. No.	Address	New parts	Parts No.	Description			Desti-nation
C75			C92-0044-05	CHIP-ELE	47UF	10WV	
C76			CK73GB1H102K	CHIP C	1000PF	K	
C77			C92-0719-05	ELECTRO	47UF	25WV	
C78			CK73GB1E103K	CHIP C	0.010UF	K	
C79			C92-0722-05	ELECTRO	470UF	16WV	
C80			CK73GB1C104K	CHIP C	0.10UF	K	
C83			CK73FB1H473K	CHIP C	0.047UF	K	
C84			CC73GCH1H120J	CHIP C	12PF	J	TK-980
C84			CC73GCH1H220J	CHIP C	22PF	J	TK-981
C85			CK73GB1H102K	CHIP C	1000PF	K	
C87			CC73GCH1H101J	CHIP C	100PF	J	
C88			CK73GB1E103K	CHIP C	0.010UF	K	
C89			CK73GB1H471K	CHIP C	470PF	K	
C90			CK73GB1H102K	CHIP C	1000PF	K	
C91,92			CK73GB1E103K	CHIP C	0.010UF	K	
C94			CK73GB1H471K	CHIP C	470PF	K	
C96			CC73GCH1H180J	CHIP C	18PF	J	
C97			CK73GB1H102K	CHIP C	1000PF	K	
C98			CC73GCH1H150J	CHIP C	15PF	J	
C99			CK73GB1H102K	CHIP C	1000PF	K	
C100			C92-0628-05	CHIP-TAN	10UF	10WV	TK-980
C102			CC73GCH1H270J	CHIP C	27PF	J	
C103			CK73GB1C104K	CHIP C	0.10UF	K	
C104			CK73GB1E103K	CHIP C	0.010UF	K	
C105			C92-0004-05	CHIP-TAN	1.0UF	16WV	
C106			CK73GB1H102K	CHIP C	1000PF	K	
C107			C92-0628-05	CHIP-TAN	10UF	10WV	
C108			CK73GB1C104K	CHIP C	0.10UF	K	
C109,110			CK73GB1H102K	CHIP C	1000PF	K	
C111			CC73GCH1H101J	CHIP C	100PF	J	
C112			CK73GB1H102K	CHIP C	1000PF	K	
C113			CK73GB1E103K	CHIP C	0.010UF	K	
C114			C92-0543-05	CHIP-TAN	3.3UF	10WV	
C115			CK73GB1H102K	CHIP C	1000PF	K	
C116			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C117			CK73GB1E103K	CHIP C	0.010UF	K	
C118			CK73GB1C104K	CHIP C	0.10UF	K	
C121			C92-0543-05	CHIP-TAN	3.3UF	10WV	
C123			CK73GB1C104K	CHIP C	0.10UF	K	
C124,125			CK73GB1H102K	CHIP C	1000PF	K	
C126			CK73GB1C104K	CHIP C	0.10UF	K	
C127			CK73GB1E103K	CHIP C	0.010UF	K	
C128,129			CC73GCH1H470J	CHIP C	47PF	J	
C131			CC73GCH1H101J	CHIP C	100PF	J	
C132			CK73GB1C104K	CHIP C	0.10UF	K	
C134			CK73FB1C224K	CHIP C	0.22UF	K	
C136			CK73FB1C224K	CHIP C	0.22UF	K	
C137			CK73GB1H471K	CHIP C	470PF	K	
C142,143			CK73GB1H471K	CHIP C	470PF	K	
C144			CK73GB1H102K	CHIP C	1000PF	K	
C150			CC73GCH1H220J	CHIP C	22PF	J	
C151			CK73GB1H102K	CHIP C	1000PF	K	
C152			C92-0777-05	ELECTRO	1000UF	25WV	
C153			CC73GCH1H100D	CHIP C	10PF	D	
C155			CK73GB1H102K	CHIP C	1000PF	K	

PARTS LIST

TX-RX UNIT (X57-6520-XX)

Ref. No.	Address	New parts	Parts No.	Description			Desti-nation	Ref. No.	Address	New parts	Parts No.	Description			Desti-nation
C156			CK73GB1E103K	CHIP C	0.010UF	K		C262			C92-0719-05	ELECTRO	47UF	25WV	
C157			CK73GB1C104K	CHIP C	0.10UF	K		C263			CK73GB1H102K	CHIP C	1000PF	K	
C158,159			CC73GCH1H040C	CHIP C	4.0PF	C		C264			CK73GB1C104K	CHIP C	0.10UF	K	
C160			CK73GB1C104K	CHIP C	0.10UF	K		C265			C93-0550-05	CHIP C	1.0PF	C	
C161			CC73GCH1H101J	CHIP C	100PF	J		C266			C93-0552-05	CHIP C	2.0PF	C	TK-981
C162			C92-0585-05	CHIP-TAN	4.7UF	16WV		C266			C93-0555-05	CHIP C	5.0PF	C	TK-980
C164			CK73GB1H471K	CHIP C	470PF	K		C267			C93-0568-05	CHIP C	47PF	J	
C166			CK73GB1C104K	CHIP C	0.10UF	K		C268			CC73FCH1H010C	CHIP C	1.0PF	C	TK-981
C167			CC73GCH1H100D	CHIP C	10PF	D		C268			CC73FCH1H470J	CHIP C	47PF	J	TK-980
C168			CC73GCH1H080D	CHIP C	8.0PF	D		C269			C93-0560-05	CHIP C	10PF	D	
C169			CK73GB1H102K	CHIP C	1000PF	K		C271			C93-0550-05	CHIP C	1.0PF	C	
C170			CC73GCH1H050C	CHIP C	5.0PF	C	TK-981	C272			CC73GCH1H010C	CHIP C	1.0PF	C	
C170			CC73GCH1H070B	CHIP C	7.0PF	B	TK-980	C273			C93-0552-05	CHIP C	2.0PF	C	TK-981
C171			CC73GCH1H101J	CHIP C	100PF	J		C273			C93-0553-05	CHIP C	3.0PF	C	TK-980
C172			CK73GB1C104K	CHIP C	0.10UF	K		C274			CC73GCH1H221J	CHIP C	220PF	J	
C173			CK73GB1E103K	CHIP C	0.010UF	K		C275			C92-0002-05	CHIP-TAN	0.22UF	35WV	
C174			C92-0585-05	CHIP-TAN	4.7UF	16WV		C276			C92-0657-05	CHIP-TAN	2.2UF	20WV	TK-981
C175			CC73GCH1H101J	CHIP C	100PF	J	TK-980	C276			C92-0754-05	CHIP-TAN	4.7UF	20WV	TK-980
C175,176			CC73GCH1H101J	CHIP C	100PF	J	TK-981	C284			CC73GCH1H470J	CHIP C	47PF	J	
C176			CC73GCH1H470J	CHIP C	47PF	J	TK-980	C286			CC73GCH1H470J	CHIP C	47PF	J	
C177			C92-0519-05	CHIP-TAN	1.0UF	25WV		C289			CK73GB1E103K	CHIP C	0.010UF	K	
C178			CC73GCH1H470J	CHIP C	47PF	J	TK-980	C303			C92-0565-05	CHIP-TAN	6.8UF	10WV	
C179			CC73GCH1H101J	CHIP C	100PF	J	TK-981	C304			CC73GCH1H101J	CHIP C	100PF	J	
C195-198			CK73GB1H102K	CHIP C	1000PF	K		C306			CC73GCH1H101J	CHIP C	100PF	J	
C207			CC73GCH1H101J	CHIP C	100PF	J		C307			CK73GB1H103K	CHIP C	0.010UF	K	
C209			CC73GCH1H101J	CHIP C	100PF	J		C308			CC73GCH1H2R5B	CHIP C	2.5PF	B	
C210			CC73GCH1H030C	CHIP C	3.0PF	C		C309			CC73GCH1H010B	CHIP C	1.0PF	B	
C211			CC73GCH1H101J	CHIP C	100PF	J		C310			CC73GCH1H1R5B	CHIP C	1.5PF	B	TK-981
C212			CC73GCH1H050C	CHIP C	5.0PF	C		C310			CC73GCH1H2R5B	CHIP C	2.5PF	B	TK-980
C213			CC73GCH1H010B	CHIP C	1.0PF	B		C313			CC73GCH1H101J	CHIP C	100PF	J	
C214,215			CC73GCH1H101J	CHIP C	100PF	J		C314			C92-0001-05	CHIP-TAN	0.1UF	35WV	TK-980
C216			CC73GCH1H010B	CHIP C	1.0PF	B	TK-981	C314			C92-0503-05	CHIP-TAN	0.068UF	35WV	TK-981
C216			CC73GCH1H1R5B	CHIP C	1.5PF	B	TK-980	C315			CK73GB1C104K	CHIP C	0.10UF	K	
C217			CK73GB1H102K	CHIP C	1000PF	K		C317			CC73GCH1H101J	CHIP C	100PF	J	
C218			CC73GCH1H101J	CHIP C	100PF	J		C318,319			CK73GB1C104K	CHIP C	0.10UF	K	
C219			CC73GCH1H110J	CHIP C	11PF	J	TK-980	C320			C92-0003-05	CHIP-TAN	0.47UF	25WV	TK-981
C219			CC73GCH1H120J	CHIP C	12PF	J	TK-981	C320			C92-0519-05	CHIP-TAN	1.0UF	25WV	TK-980
C220			CC73GCH1H101J	CHIP C	100PF	J		C321			CC73GCH1H040C	CHIP C	4.0PF	C	
C221			CK73GB1H102K	CHIP C	1000PF	K		C322			C92-0003-05	CHIP-TAN	0.47UF	25WV	TK-981
C222			CC73GCH1H101J	CHIP C	100PF	J		C322			C92-0519-05	CHIP-TAN	1.0UF	25WV	TK-980
C224			CK73GB1H102K	CHIP C	1000PF	K		C325			C92-0003-05	CHIP-TAN	0.47UF	25WV	TK-981
C227			CK73GB1H103K	CHIP C	0.010UF	K		C325			C92-0519-05	CHIP-TAN	1.0UF	25WV	TK-980
C228			CK73GB1H102K	CHIP C	1000PF	K		C326			CK73FB1C154K	CHIP C	0.15UF	K	
C229			CK73GB1H103K	CHIP C	0.010UF	K		C327			CC73GCH1H101J	CHIP C	100PF	J	
C234			CC73GCH1H101J	CHIP C	100PF	J	TK-981	C328			CK73GB1H471K	CHIP C	470PF	K	
C234			CC73GCH1H150J	CHIP C	15PF	J	TK-980	C330			CC73FCH1H150J	CHIP C	15PF	J	TK-980
C235			CC73GCH1H020B	CHIP C	2.0PF	B		C330			CC73FCH1H470J	CHIP C	47PF	J	TK-981
C236			CC73GCH1H101J	CHIP C	100PF	J		C401-405			CC73GCH1H020B	CHIP C	2.0PF	B	
C240			CK73GB1E103K	CHIP C	0.010UF	K		C437			CK73GB1H102K	CHIP C	1000PF	K	
C245			CC73GCH1H101J	CHIP C	100PF	J		C438			CC73GCH1H220J	CHIP C	22PF	J	
C246			C92-0001-05	CHIP-TAN	0.1UF	35WV		CN1			E40-5737-05	PIN ASSY			
C247			CC73GCH1H101J	CHIP C	100PF	J		CN2			E40-5738-05	PIN ASSY			
C249			CC73GCH1H100D	CHIP C	10PF	D		CN3			E40-3247-05	PIN ASSY			
C252			CK73GB1H102K	CHIP C	1000PF	K		CN4			E40-5738-05	PIN ASSY			
C253			CC73FCH1H060D	CHIP C	6.0PF	D	TK-980	CN5			E40-3247-05	PIN ASSY			
C253			CC73FCH1H080D	CHIP C	8.0PF	D	TK-981	CN6			E40-3246-05	PIN ASSY			
C255			CC73FCH1H040C	CHIP C	4.0PF	C	TK-981	CN7			E40-5982-05	FLAT CABLE CONNECTOR			
C255			CC73FCH1H100D	CHIP C	10PF	D	TK-980	J1			E11-0442-05	3.5D PHONE JACK (3P)			
C256			CK73GB1H102K	CHIP C	1000PF	K		-			J31-0543-05	COLLAR			
C258			CK73GB1C104K	CHIP C	0.10UF	K									

PARTS LIST

TX-RX UNIT (X57-6520-XX)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
CF1		L72-0986-05	CERAMIC FILTER	TK-981	R27				RK73GB1J473J	CHIP R 47K J 1/16W	
CF1		L72-0998-05	CERAMIC FILTER	TK-980	R28				R92-1252-05	CHIP R 0 OHM J 1/16W	
L1		L40-4795-34	SMALL FIXED INDUCTOR (4.7UH)		R29				RK73GB1J220J	CHIP R 22 J 1/16W	
L3,4		L40-1875-92	SMALL FIXED INDUCTOR (18NH)		R30				RK73GB1J224J	CHIP R 220K J 1/16W	
L5		L40-1092-34	SMALL FIXED INDUCTOR		R31				RK73GB1J104J	CHIP R 100K J 1/16W	
L6		L34-4459-05	COIL		R32,33				RK73GB1J474J	CHIP R 470K J 1/16W	
L8		L92-0138-05	CHIP FERRITE		R34				R92-1252-05	CHIP R 0 OHM J 1/16W	
L9		L40-8265-92	SMALL FIXED INDUCTOR (8.2NH)		R36				RK73GB1J103J	CHIP R 10K J 1/16W	
L10		L40-1092-34	SMALL FIXED INDUCTOR		R37				R92-1252-05	CHIP R 0 OHM J 1/16W	
L11		L40-1091-37	SMALL FIXED INDUCTOR (1.000UH)		R39				RK73GB1J101J	CHIP R 100 J 1/16W	
L203		L79-1465-05	DIELECTRIC FILTER	TK-980	R40				RK73GB1J472J	CHIP R 4.7K J 1/16W	
L203		L79-1467-05	DIELECTRIC FILTER	TK-981	R41				RK73GB1J183J	CHIP R 18K J 1/16W	
L205		L40-1075-92	SMALL FIXED INDUCTOR (10NH)	TK-981	R42				RK73GB1J333J	CHIP R 33K J 1/16W	
L205,206		L40-8265-92	SMALL FIXED INDUCTOR (8.2NH)	TK-980	R44,45				RK73GB1J154J	CHIP R 150K J 1/16W	
L206		L40-6865-92	SMALL FIXED INDUCTOR (6.8NH)	TK-981	R46				RK73GB1J104J	CHIP R 100K J 1/16W	
L207		L79-1465-05	DIELECTRIC FILTER	TK-980	R47				RK73GB1J473J	CHIP R 47K J 1/16W	
L207		L79-1467-05	DIELECTRIC FILTER	TK-981	R48				RK73GB1J122J	CHIP R 1.2K J 1/16W	
L208		L40-4763-92	SMALL FIXED INDUCTOR (4.7NH)		R49				RK73GB1J102J	CHIP R 1.0K J 1/16W	
L209		L40-8265-92	SMALL FIXED INDUCTOR (8.2NH)		R50				RK73GB1J103J	CHIP R 10K J 1/16W	
L210		L40-3985-45	SMALL FIXED INDUCTOR (0.39UH)		R52				RK73GB1J104J	CHIP R 100K J 1/16W	
L211		L40-6885-45	SMALL FIXED INDUCTOR (0.68UH)		R53				R92-1252-05	CHIP R 0 OHM J 1/16W	
L218		L40-1078-94	SMALL FIXED INDUCTOR (10NH)		R54				RK73GB1J154J	CHIP R 150K J 1/16W	
L220		L34-1306-15	AIR-CORE COIL		R55				RK73GB1J104J	CHIP R 100K J 1/16W	
L221		L34-1317-05	AIR-CORE COIL		R56				RK73GB1J103J	CHIP R 10K J 1/16W	
L222,223		L34-1307-05	AIR-CORE COIL	TK-980	R57				RK73GB1J473J	CHIP R 47K J 1/16W	
L222,223		L34-1313-05	AIR-CORE COIL	TK-981	R58				RK73GB1J102J	CHIP R 1.0K J 1/16W	
L224		L34-1306-15	AIR-CORE COIL		R60				RK73GB1J472J	CHIP R 4.7K J 1/16W	
L225		L92-0179-05	CHIP FERRITE		R61				RK73GB1J103J	CHIP R 10K J 1/16W	
L226		L40-1078-94	SMALL FIXED INDUCTOR (10NH)		R62				RK73GB1J101J	CHIP R 100 J 1/16W	
L229		L34-1308-15	AIR-CORE COIL		R63-65				R92-1252-05	CHIP R 0 OHM J 1/16W	
L300		L40-1563-92	SMALL FIXED INDUCTOR (1.5NH)		R66				RK73GB1J682J	CHIP R 6.8K J 1/16W	
L301		L40-3963-92	SMALL FIXED INDUCTOR (3.9NH)	TK-981	R67				RK73GB1J470J	CHIP R 47 J 1/16W	
L301		L40-4763-92	SMALL FIXED INDUCTOR (4.7NH)	TK-980	R69				RK73GB1J102J	CHIP R 1.0K J 1/16W	
L303,304		L40-2763-92	SMALL FIXED INDUCTOR (2.7NH)		R70-73				R92-1252-05	CHIP R 0 OHM J 1/16W	
L305		L92-0179-05	CHIP FERRITE		R74				RK73GB1J473J	CHIP R 47K J 1/16W	
L310-312		L40-8265-92	SMALL FIXED INDUCTOR (8.2NH)		R75				RK73GB1J102J	CHIP R 1.0K J 1/16W	
X1		L77-1882-05	VCXO (16.8MHZ)		R76				RK73GB1J153J	CHIP R 15K J 1/16W	
X2		L77-1762-05	CRYSTAL RESONATOR (44.395MHZ)		R77				RK73GB1J333J	CHIP R 33K J 1/16W	
XF1		L71-0525-05	MCF (5KHZ)	TK-980	R78				RK73GB1J104J	CHIP R 100K J 1/16W	
XF1		L71-0583-05	MCF (3.75KHZ)	TK-981	R79				RK73GB1J180J	CHIP R 18 J 1/16W	TK-981
R1		RK73GB1J102J	CHIP R 1.0K J 1/16W		R79				RK73GB1J390J	CHIP R 39 J 1/16W	TK-980
R2		R92-1252-05	CHIP R 0 OHM J 1/16W		R80				RK73GB1J473J	CHIP R 47K J 1/16W	TK-980
R3		RK73GB1J101J	CHIP R 100 J 1/16W		R82,83				RK73GB1J151J	CHIP R 150 J 1/16W	TK-980
R4		RK73GB1J102J	CHIP R 1.0K J 1/16W		R82,83				RK73GB1J271J	CHIP R 270 J 1/16W	TK-981
R6,7		R92-1252-05	CHIP R 0 OHM J 1/16W		R85				RK73GB1J821J	CHIP R 820 J 1/16W	
R8		RK73GB1J102J	CHIP R 1.0K J 1/16W		R86,87				R92-1252-05	CHIP R 0 OHM J 1/16W	
R9		R92-1252-05	CHIP R 0 OHM J 1/16W		R88				RK73EB2B181J	CHIP R 180 J 1/8W	
R10,11		RK73GB1J102J	CHIP R 1.0K J 1/16W		R89				RK73EB2B151J	CHIP R 150 J 1/8W	
R12		R92-1252-05	CHIP R 0 OHM J 1/16W		R90				RK73GB1J2R2J	CHIP R 2.2 J 1/16W	
R14		RK73GB1J473J	CHIP R 47K J 1/16W		R91				RK73GB1J472J	CHIP R 4.7K J 1/16W	
R15		RK73GB1J103J	CHIP R 10K J 1/16W		R92				RK73FB2A472J	CHIP R 4.7K J 1/10W	
R16		RK73GB1J274J	CHIP R 270K J 1/16W		R93				RK73FB2A470J	CHIP R 47 J 1/10W	
R17		R92-1252-05	CHIP R 0 OHM J 1/16W		R94				R92-1252-05	CHIP R 0 OHM J 1/16W	
R19		RK73GB1J153J	CHIP R 15K J 1/16W		R95				RK73FB2A154J	CHIP R 150K J 1/10W	
R20		RK73GB1J104J	CHIP R 100K J 1/16W		R96				RK73GB1J181J	CHIP R 180 J 1/16W	TK-981
R21		RK73GB1J563J	CHIP R 56K J 1/16W		R96				RK73GB1J331J	CHIP R 330 J 1/16W	TK-980
R22		RK73GB1J104J	CHIP R 100K J 1/16W		R97,98				RK73GB1J473J	CHIP R 47K J 1/16W	
R23		RK73GB1J224J	CHIP R 220K J 1/16W		R99				RK73GB1J152J	CHIP R 1.5K J 1/16W	
R25		RK73GB1J394J	CHIP R 390K J 1/16W		R100				RK73GB1J151J	CHIP R 150 J 1/16W	TK-981
R26		RK73GB1J104J	CHIP R 100K J 1/16W		R100				RK73GB1J331J	CHIP R 330 J 1/16W	TK-980

PARTS LIST

TX-RX UNIT (X57-6520-XX)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
R101			RK73FB2A470J	CHIP R 47 J 1/10W		R236			RK73GB1J470J	CHIP R 47 J 1/16W	
R102			RK73FB2A102J	CHIP R 1.0K J 1/10W		R237			RK73GB1J153J	CHIP R 15K J 1/16W	
R103			RK73FB2A223J	CHIP R 22K J 1/10W		R239			RK73GB1J154J	CHIP R 150K J 1/16W	
R104			RK73FB2A473J	CHIP R 47K J 1/10W		R240			RK73GB1J333J	CHIP R 33K J 1/16W	
R105			R92-2538-05	RN 3.9K B 1/8W		R247			R92-1273-05	CHIP C 39 J 1/2W	
R106			R92-1252-05	CHIP R 0 OHM J 1/16W		R248,249			R92-1214-05	CHIP R 120 J 1/2W	TK-980
R107			RK73GB1J473J	CHIP R 47K J 1/16W		R248,249			R92-1261-05	CHIP R 150 J 1/2W	TK-981
R109			R92-0670-05	CHIP R 0 OHM		R250			RK73GB1J470J	CHIP R 47 J 1/16W	
R110			RK73GB1J470J	CHIP R 47 J 1/16W		R251			RK73GB1J474J	CHIP R 470K J 1/16W	
R111			RK73GB1J472J	CHIP R 4.7K J 1/16W		R252			R92-1217-05	CHIP R 0 OHM	
R112,113			R92-1268-05	RN 4.7K B 1/8W		R253,254			RK73GB1J821J	CHIP R 820 J 1/16W	
R116			RK73GB1J473J	CHIP R 47K J 1/16W		R255,256			R92-1308-05	CHIP R 22 J 1W	
R118			RK73GB1J392J	CHIP R 3.9K J 1/16W	TK-980	R257,258			R92-0670-05	CHIP R 0 OHM	
R119			RK73GB1J103J	CHIP R 10K J 1/16W		R260			RK73FB2A153J	CHIP R 15K J 1/10W	
R120			R92-1268-05	RN 4.7K B 1/8W		R261			RK73FB2A182J	CHIP R 1.8K J 1/10W	
R121			RK73GB1J472J	CHIP R 4.7K J 1/16W		R301-303			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R122			RK73FB2A272J	CHIP R 2.7K J 1/10W		R305			RK73GB1J103J	CHIP R 10K J 1/16W	
R124			RK73GB1J223J	CHIP R 22K J 1/16W		R306			RK73GB1J102J	CHIP R 1.0K J 1/16W	TK-980
R127	*		R92-2682-05	CHIP R 2.0K B 1/16W		R306			RK73GB1J471J	CHIP R 470 J 1/16W	TK-981
R128			RK73GB1J223J	CHIP R 22K J 1/16W		R307			R92-1252-05	CHIP R 0 OHM J 1/16W	
R129			RK73GB1J100J	CHIP R 10 J 1/16W		R308			RK73GB1J101J	CHIP R 100 J 1/16W	
R132			RK73GB1J104J	CHIP R 100K J 1/16W		R309			RK73GB1J154J	CHIP R 150K J 1/16W	TK-981
R134			RK73GB1J473J	CHIP R 47K J 1/16W		R309			RK73GB1J333J	CHIP R 33K J 1/16W	TK-980
R135			R92-1261-05	CHIP R 150 J 1/2W		R310			RK73GB1J103J	CHIP R 10K J 1/16W	TK-980
R137			RK73GB1J473J	CHIP R 47K J 1/16W		R310			RK73GB1J473J	CHIP R 47K J 1/16W	TK-981
R139			RK73GB1J102J	CHIP R 1.0K J 1/16W		R311			RK73GB1J561J	CHIP R 560 J 1/16W	
R140			R92-1252-05	CHIP R 0 OHM J 1/16W		R312			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R141			RK73GB1J104J	CHIP R 100K J 1/16W		R313			RK73GB1J273J	CHIP R 27K J 1/16W	
R143			RK73GB1J102J	CHIP R 1.0K J 1/16W		R314			RK73GB1J103J	CHIP R 10K J 1/16W	TK-981
R144			RK73GB1J223J	CHIP R 22K J 1/16W		R314			RK73GB1J223J	CHIP R 22K J 1/16W	TK-980
R145			RK73GB1J104J	CHIP R 100K J 1/16W		R315			RK73GB1J473J	CHIP R 47K J 1/16W	
R146			R92-1215-05	CHIP R 470 J 1/2W		R316,317			R92-1252-05	CHIP R 0 OHM J 1/16W	
R148			RK73FB2A472J	CHIP R 4.7K J 1/10W		R318			RK73GB1J391J	CHIP R 390 J 1/16W	
R150			R92-0670-05	CHIP R 0 OHM		R319			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R151-153			R92-1252-05	CHIP R 0 OHM J 1/16W		R320			R92-1252-05	CHIP R 0 OHM J 1/16W	
R154			RK73GB1J103J	CHIP R 10K J 1/16W		R321			RK73GB1J470J	CHIP R 47 J 1/16W	
R155			RK73GB1J333J	CHIP R 33K J 1/16W		R322			RK73GB1J100J	CHIP R 10 J 1/16W	
R156			RK73GB1J471J	CHIP R 470 J 1/16W		R323			RK73GB1J470J	CHIP R 47 J 1/16W	TK-980
R157			RK73GB1J101J	CHIP R 100 J 1/16W		R323			RK73GB1J680J	CHIP R 68 J 1/16W	TK-981
R158,159			R92-1252-05	CHIP R 0 OHM J 1/16W		R408			R92-1252-05	CHIP R 0 OHM J 1/16W	
R160			RK73GB1J184J	CHIP R 180K J 1/16W		R411			R92-1252-05	CHIP R 0 OHM J 1/16W	
R163			RK73GB1J104J	CHIP R 100K J 1/16W		R414			R92-1252-05	CHIP R 0 OHM J 1/16W	
R166			R92-1252-05	CHIP R 0 OHM J 1/16W		D1-6			DA204U	DIODE	
R168			R92-1252-05	CHIP R 0 OHM J 1/16W		D7			O2DZ20(Y,Z)	ZENER DIODE	
R170,171			R92-1252-05	CHIP R 0 OHM J 1/16W		D11			DAN202U	DIODE	
R172			RK73GB1J221J	CHIP R 220 J 1/16W		D16			1SS355	DIODE	
R176			R92-0670-05	CHIP R 0 OHM		D17			DA204U	DIODE	
R181,182		*	R92-0679-05	CHIP R 0 OHM		D18,19			1SS355	DIODE	
R183			R92-2682-05	CHIP R 2.0K B 1/16W		D20			O2DZ5.6(X,Y)	ZENER DIODE	
R209			RK73GB1J103J	CHIP R 10K J 1/16W		D21			MINISMDC075-02	VARISTOR	
R210			RK73GB1J473J	CHIP R 47K J 1/16W		D24			1SS355	DIODE	
R211			RK73GB1J101J	CHIP R 100 J 1/16W		D26			22ZR-10D	SURGE ABSORBER	
R212			RK73GB1J5R6J	CHIP R 5.6 J 1/16W		D28			O2DZ15(X,Y)	ZENER DIODE	
R214			RK73GB1J221J	CHIP R 220 J 1/16W		D31			1SS355	DIODE	
R217			RK73GB1J101J	CHIP R 100 J 1/16W		D32			22ZR-10D	SURGE ABSORBER	
R218			RK73GB1J473J	CHIP R 47K J 1/16W		D34			O2DZ18(X,Y)	ZENER DIODE	
R219			RK73GB1J273J	CHIP R 27K J 1/16W		D35			MA742	DIODE	
R220			RK73GB1J473J	CHIP R 47K J 1/16W		D37			DSA3A1	DIODE	
R221			RK73GB1J153J	CHIP R 15K J 1/16W		D38			O2DZ5.1(Y)	ZENER DIODE	
R223			RK73GB1J102J	CHIP R 1.0K J 1/16W							

PARTS LIST

TX-RX UNIT (X57-6520-XX)

PLL/VCO (X58-4530-XX)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
D200			HSM88AS	DIODE	
D208			MA4PH633	DIODE	
D209,210			XB15A709	DIODE	
IC1			TA75W01FU	MOS-IC	
IC2			TC75W51FU	MOS-IC	
IC3			TA75W558FU	MOS-IC	
IC4			TC4S6F	MOS-IC	
IC5			M62363FP	MOS-IC	
IC6			TA75W558FU	MOS-IC	
IC7,8			BU4094BCFV	MOS-IC	
IC9			TA78L05F	MOS-IC	
IC10			LA4422	BI-POLAR IC	
IC11			TA31136FN	MOS-IC	
IC12			TA78L05F	MOS-IC	
IC13			NJM2904E	MOS-IC	
IC14			TA7808S	MOS-IC	
IC15			TC4013BF(N)	MOS-IC	
IC16			NJM78L08UA	BI-POLAR IC	
IC300			CD8468	MOS-IC	
IC300			SA7025DK	MOS-IC	
IC400	*		RA20H8087M	MOS-IC	TK-980
IC400	*		RA20H8994M	MOS-IC	TK-981
Q1			2SK1824	FET	
Q2			2SC2412K(S)	TRANSISTOR	
Q4			DTD114EK	DIGITAL TRANSISTOR	
Q5,6			DTC114EE	DIGITAL TRANSISTOR	
Q7			2SC4226(R24)	TRANSISTOR	
Q8			DTC363EU	DIGITAL TRANSISTOR	
Q9			DTA114YUA	DIGITAL TRANSISTOR	
Q10			DTC114EE	DIGITAL TRANSISTOR	
Q11			2SA1362(Y)	TRANSISTOR	
Q12			2SB1132(O,R)	TRANSISTOR	
Q13			DTC114EE	DIGITAL TRANSISTOR	
Q15			2SC2059K(P)	TRANSISTOR	
Q17			2SC4116(GR)	TRANSISTOR	
Q18			2SK1824	FET	
Q19			2SB1370(E,F)	TRANSISTOR	
Q20			DTA144EUA	DIGITAL TRANSISTOR	
Q21			DTC144EUA	DIGITAL TRANSISTOR	
Q22			DTC114EE	DIGITAL TRANSISTOR	
Q25,26			DTA114EE	DIGITAL TRANSISTOR	
Q27			2SA1641(S,T)	TRANSISTOR	
Q28			DTC114EE	DIGITAL TRANSISTOR	
Q30			DTA114EE	DIGITAL TRANSISTOR	
Q31			DTC114EE	DIGITAL TRANSISTOR	
Q32			2SK1824	FET	
Q33			DTC144EE	DIGITAL TRANSISTOR	
Q34			2SC2712(GR)	TRANSISTOR	
Q201			2SC4094(R37)	TRANSISTOR	
Q202			2SC3356(R24)	TRANSISTOR	
Q203			3SK255	FET	
Q204			2SK2596	FET	
Q205			DTC144EE	DIGITAL TRANSISTOR	
Q300			2SC4226(R24)	TRANSISTOR	
Q301,302			2SC3722K(S)	TRANSISTOR	
TH1			157-104-55001	THERMISTOR	
A1			X58-4530-10	SUB UNIT	TK-980
A1			X58-4530-11	SUB UNIT	TK-981

Ref. No.	Address	New parts	Parts No.	Description			Desti-nation
PLL/VCO (X58-453X-XX) 0-10 : TK-980 0-11 : TK-981							
C100			CK73GB1H471K	CHIP C	470PF	K	
C101			CC73GCH1H080B	CHIP C	8.0PF	B	TK-980
C101			CC73GCH1H4R5B	CHIP C	4.5PF	B	TK-981
C102			CC73GCH1HR75C	CHIP C	0.75PF	C	
C103			CK73GB1H471K	CHIP C	470PF	K	
C104			CC73GCH1H010B	CHIP C	1.0PF	B	TK-981
C104			CC73GCH1H1R5B	CHIP C	1.5PF	B	TK-980
C105			CC73GCH1H040B	CHIP C	4.0PF	B	TK-981
C105			CC73GCH1H060B	CHIP C	6.0PF	B	TK-980
C106,107			CC73GCH1HR75B	CHIP C	0.75PF	B	
C108			CK73GB1H102K	CHIP C	1000PF	K	
C109			CC73GCH1H030B	CHIP C	3.0PF	B	
C110			CC73GCH1H050B	CHIP C	5.0PF	B	
C111			CC73GCH1H470J	CHIP C	47PF	J	
C112			CK73GB1H471K	CHIP C	470PF	K	
C113			CC73GCH1H040B	CHIP C	4.0PF	B	TK-980
C113			CC73GCH1H050B	CHIP C	5.0PF	B	TK-981
C114			CK73GB1H102K	CHIP C	1000PF	K	TK-980
C114			CK73GB1H471K	CHIP C	470PF	K	TK-981
C115			CC73GCH1H030B	CHIP C	3.0PF	B	
C116			CC73GCH1H060B	CHIP C	6.0PF	B	
C117			CK73GB1H102K	CHIP C	1000PF	K	
C118			CC73GCH1HR75B	CHIP C	0.75PF	B	
TC100			C05-0384-05	CERAMIC TRIMMER (10PF)			
CN100			E40-5699-05	PIN ASSY			
			F10-2279-04	SHIELDING CASE			
L100,101			L40-1595-34	SMALL FIXED INDUCTOR (1.5UH)			
L102			L40-1071-35	SMALL FIXED INDUCTOR (10NH)			TK-981
L102			L40-1271-35	SMALL FIXED INDUCTOR (12NH)			TK-980
L103			L34-4518-05	AIR-CORE COIL			
L104			L40-1098-76	SMALL FIXED INDUCTOR (1UH)			
L105			L40-1871-35	SMALL FIXED INDUCTOR (18NH)			TK-981
L105			L40-3971-35	SMALL FIXED INDUCTOR (39NH)			TK-980
L106			L40-1571-35	SMALL FIXED INDUCTOR (15NH)			TK-981
L106			L40-2771-35	SMALL FIXED INDUCTOR (27NH)			TK-980
L107			L40-1595-34	SMALL FIXED INDUCTOR (1.5UH)			
R100,101			R92-1252-05	CHIP R	0 OHM	J	1/16W
R102			RK73GB1J102J	CHIP R	1.0K	J	1/16W
R103			R92-1252-05	CHIP R	0 OHM	J	1/16W
R104			RK73GB1J101J	CHIP R	100	J	1/16W
R105			RK73GB1J823J	CHIP R	82K	J	1/16W
R106			RK73GB1J154J	CHIP R	150K	J	1/16W
R107			RK73GB1J270J	CHIP R	27	J	1/16W
R108,109			RK73GB1J101J	CHIP R	100	J	1/16W
R110			RK73GB1J181J	CHIP R	180	J	1/16W
R110			RK73GB1J221J	CHIP R	220	J	1/16W
R111			RK73GB1J223J	CHIP R	22K	J	1/16W
R112			RK73GB1J103J	CHIP R	10K	J	1/16W
R113			RK73GB1J470J	CHIP R	47	J	1/16W
R114			R92-1252-05	CHIP R	0 OHM	J	1/16W
D100,101			1SV283	VARIABLE CAPACITANCE DIODE			
D102			1SV214	VARIABLE CAPACITANCE DIODE			
Q100			2SC4226(R24)	TRANSISTOR			
Q101			2SK508NV(K52)	FET			
Q102			2SC4226(R24)	TRANSISTOR			

A

B

C

D

E

F

G

H

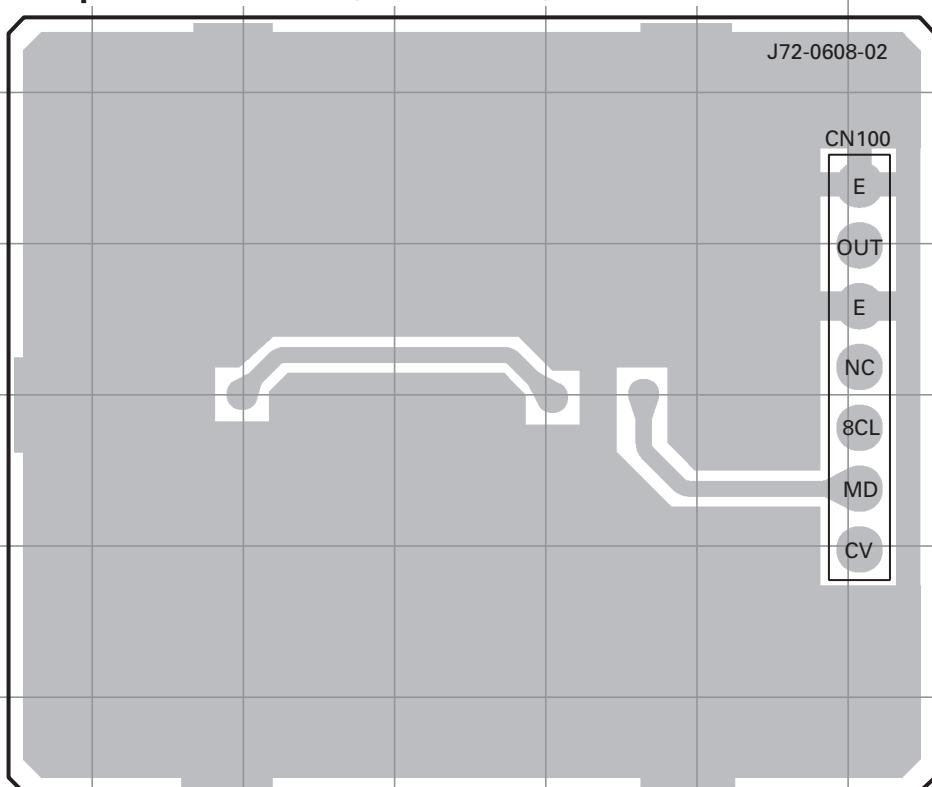
I

J

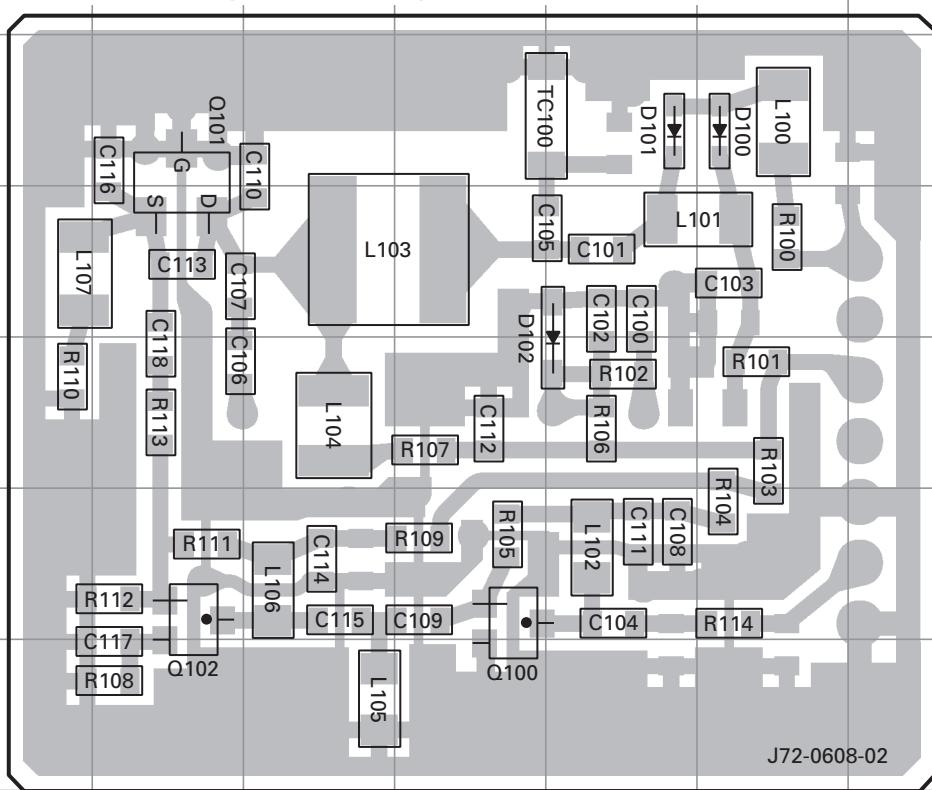
PC BOARD

TK-980/981

PLL/VCO (X58-453X-XX) 0-10 : TK-980 0-11 : TK-981
 Component side view (J72-0608-02)



PLL/VCO (X58-453X-XX) 0-10 : TK-980 0-11 : TK-981
 Foil side view (J72-0608-02)

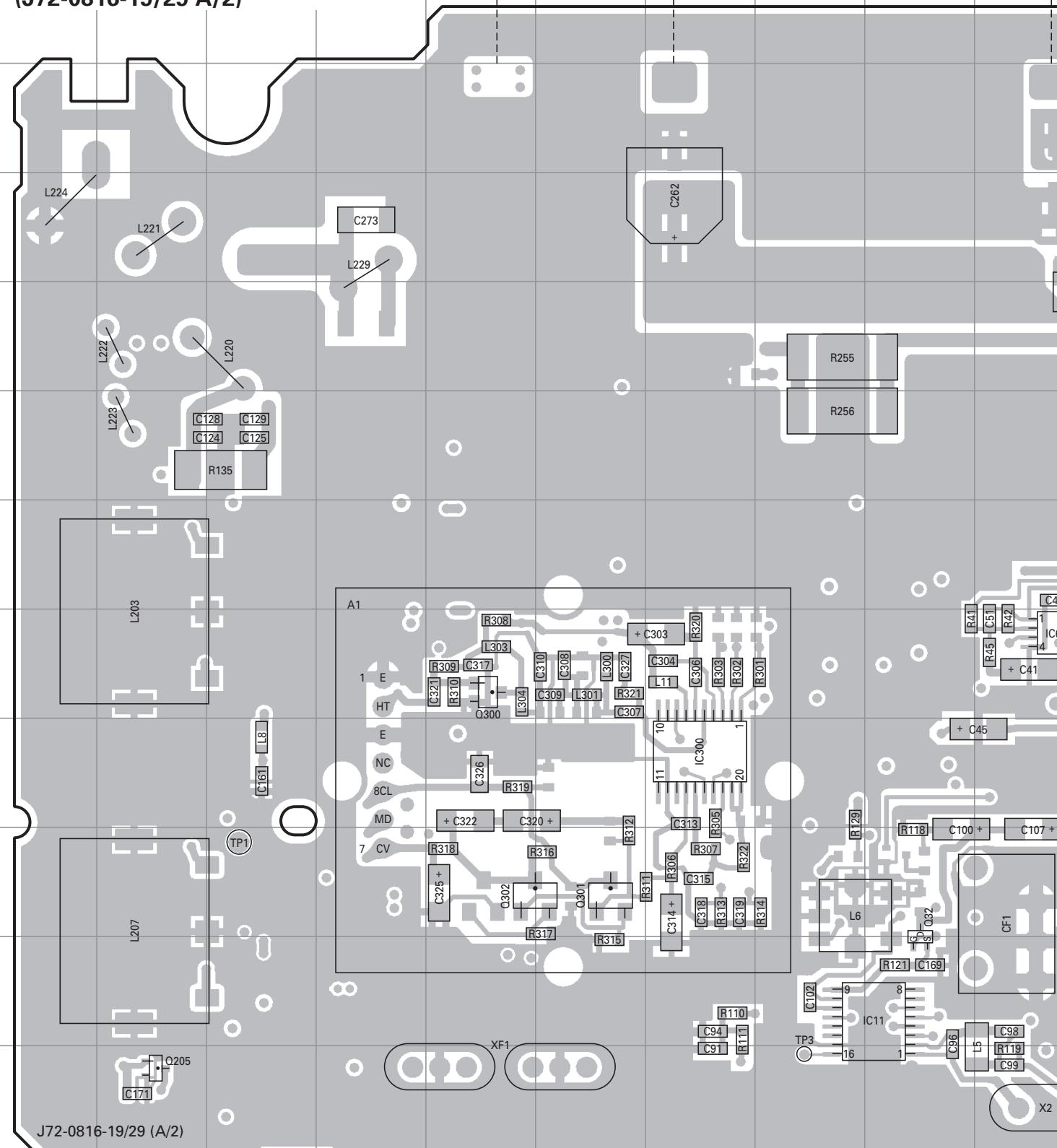


TK-980/981 PC BOARD

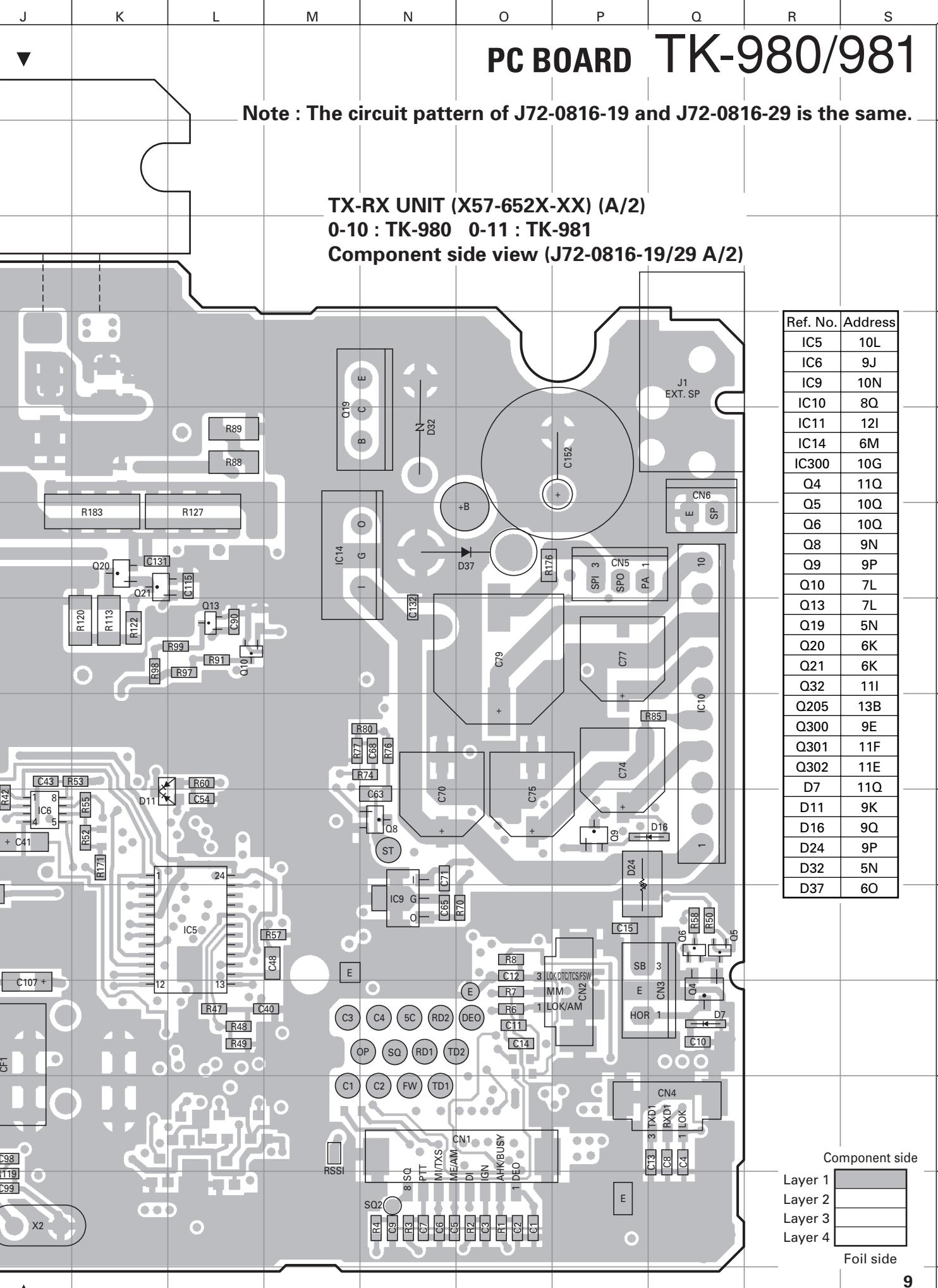
TX-RX UNIT (X57-652X-XX) (A/2)

0-10 : TK-980 0-11 : TK-981

Component side view
(J72-0816-19/29 A/2)



J72-0816-19/29 (A/2)



TK-980/981 PC BOARD

TX-RX UNIT (X57-652X-XX) (A/2)

0-10 : TK-980 0-11 : TK-981

Component side view

(J72-0816-19/29 A/2)

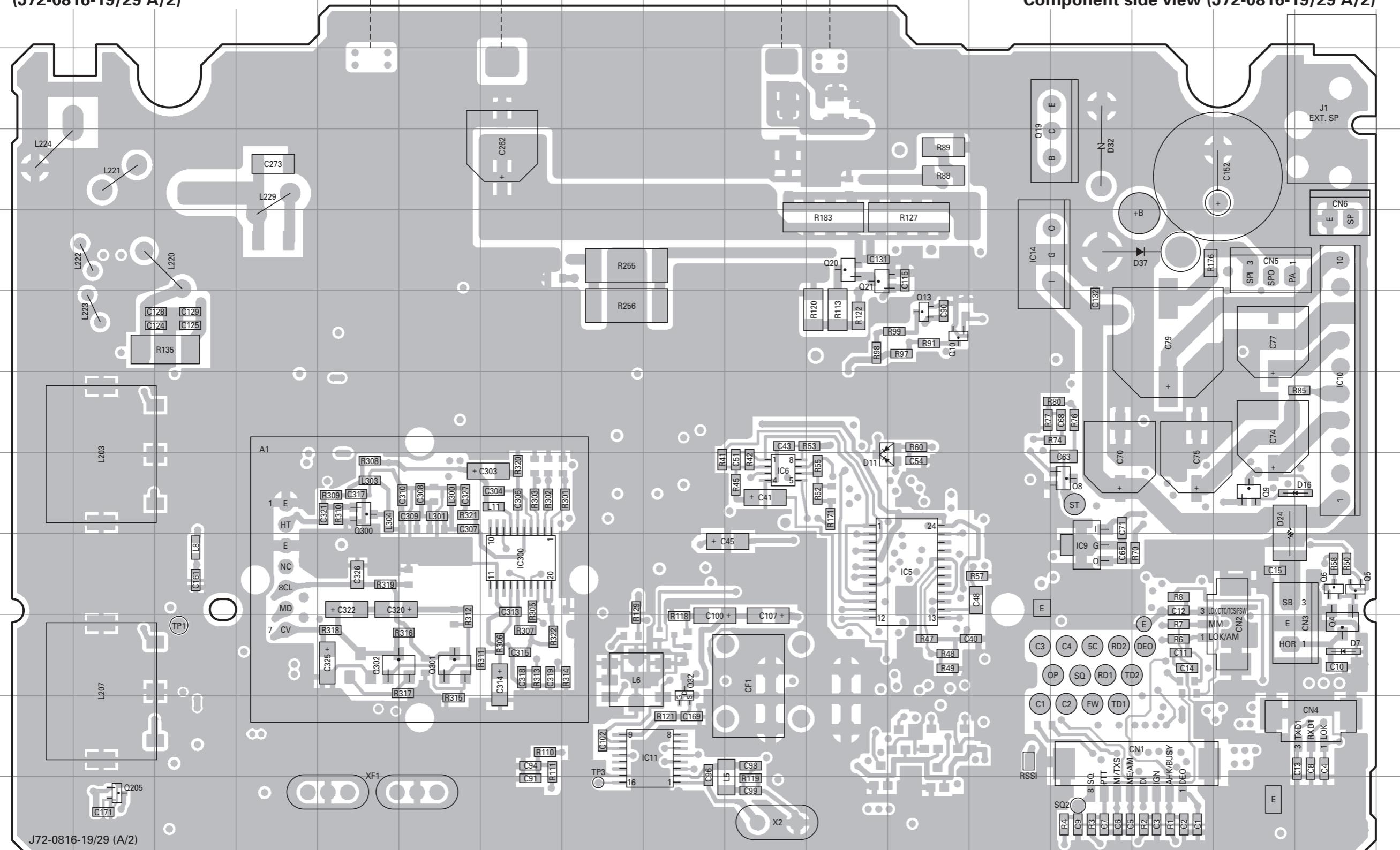
PC BOARD | K-980/981

Note : The circuit pattern of J72-0816-19 and J72-0816-29 is the same.

TX-RX UNIT (X57-652X-XX) (A/2)

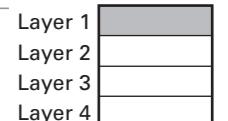
0-10 : TK-980 0-11 : TK-981

Component side view (J72-0816-19/29 A/2)



Ref. No.	Address
IC5	10L
IC6	9J
IC9	10N
IC10	8Q
IC11	12I
IC14	6M
IC300	10G
Q4	11Q
Q5	10Q
Q6	10Q
Q8	9N
Q9	9P
Q10	7L
Q13	7L
Q19	5N
Q20	6K
Q21	6K
Q32	11I
Q205	13B
Q300	9E
Q301	11F
Q302	11E
D7	11Q
D11	9K
D16	9Q
D24	9P
D32	5N
D37	6O

Component side



Foil side

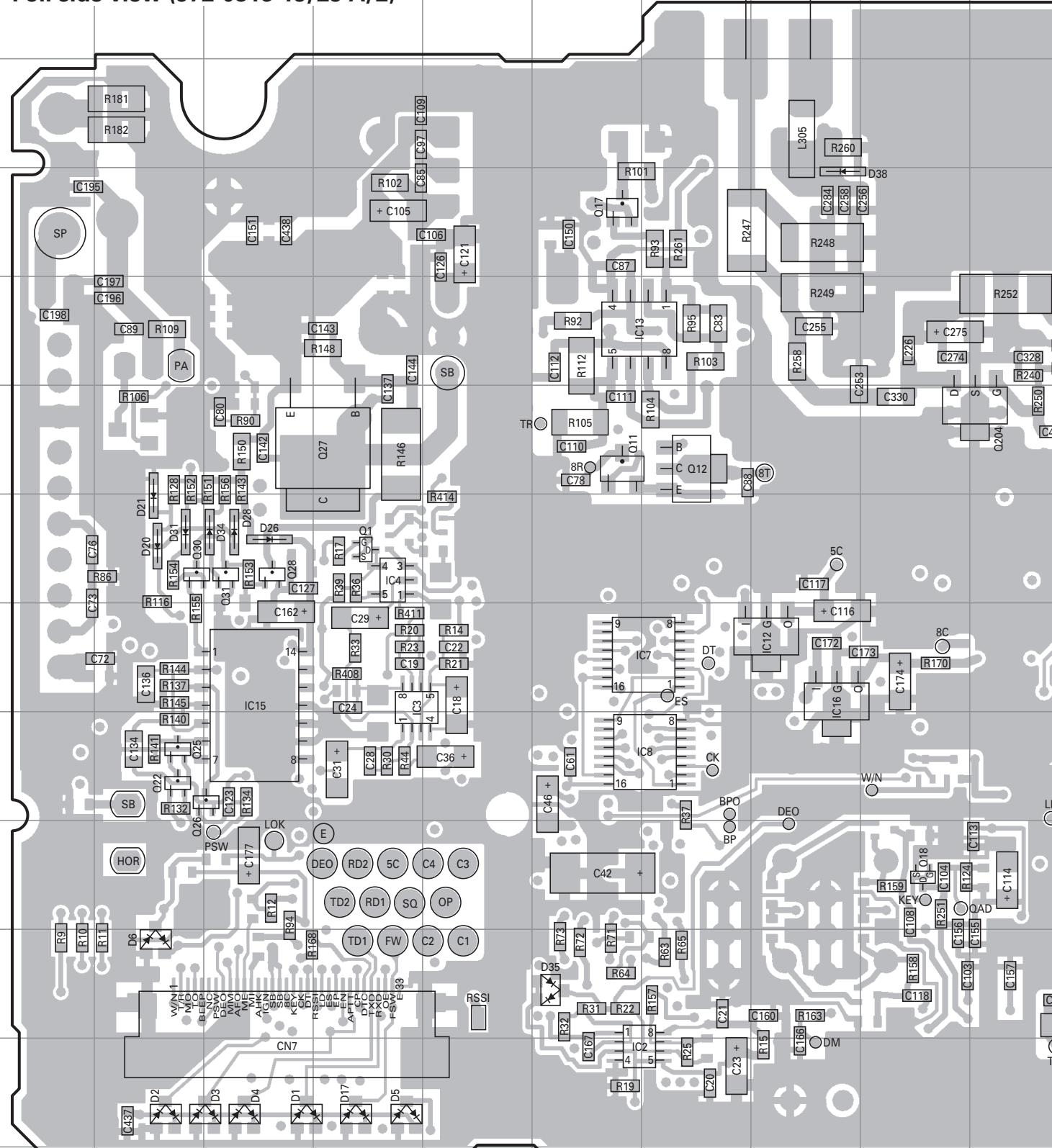
TK-980/981 PC BOARD

Note : The circuit pattern of J72-0816-19 and J72-0816-29 is the same.

TX-RX UNIT (X57-652X-XX) (A/2)

0-10 : TK-980 0-11 : TK-981

Foil side view (J72-0816-19/29 A/2)



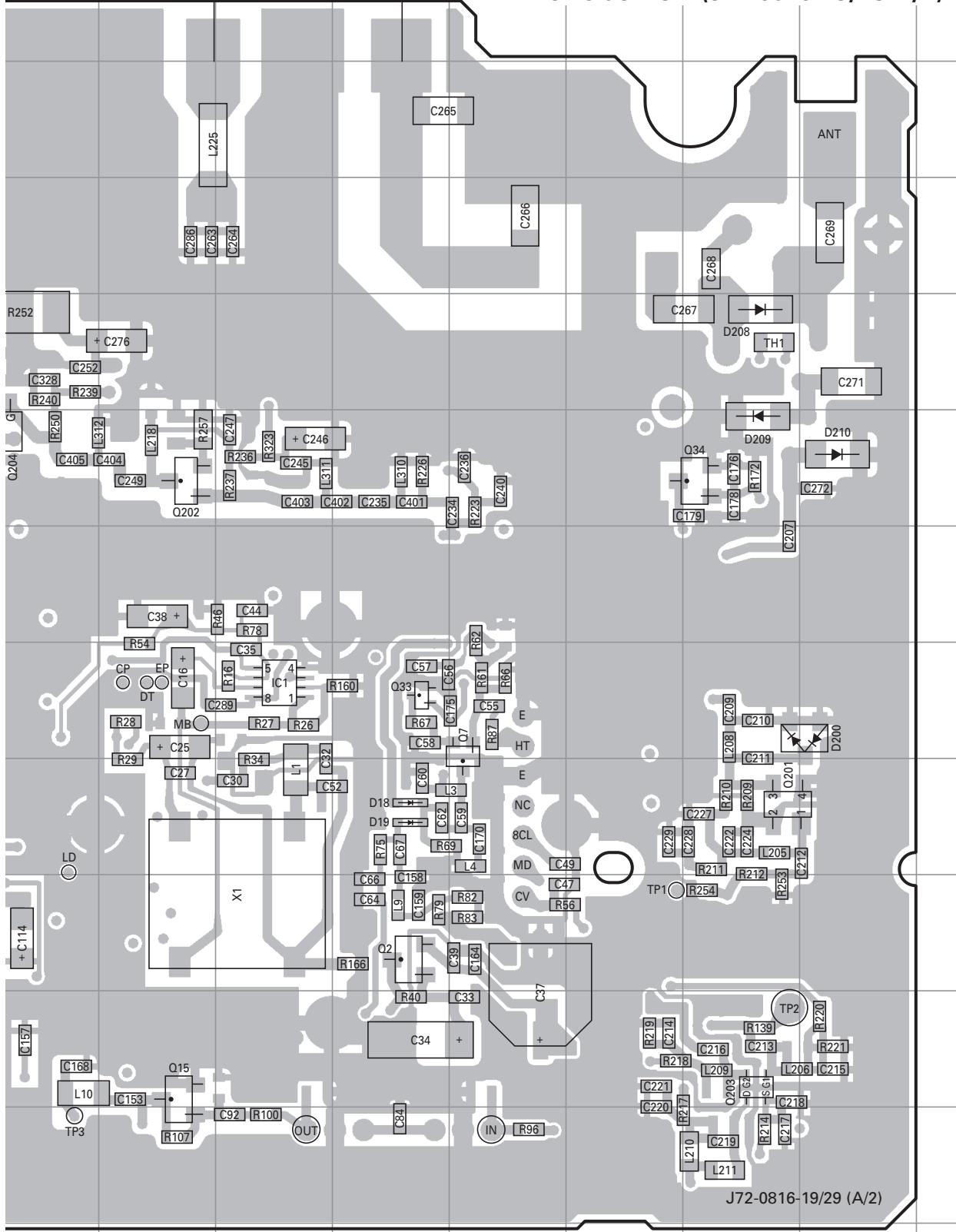
IC400

3 4

TX-RX UNIT (X57-652X-XX) (A/2)

0-10 : TK-980 0-11 : TK-981

Foil side view (J72-0816-19/29 A/2)



Ref. No.	Address
IC1	9L
IC2	13F
IC3	9D
IC4	8D
IC7	9G
IC8	10G
IC12	9H
IC13	6F
IC15	9C
IC16	9H
IC400	2J
Q1	8D
Q2	11M
Q7	9N
Q11	7F
Q12	7G
Q15	12K
Q17	5F
Q18	11I
Q22	10B
Q25	10B
Q26	10C
Q27	7D
Q28	8C
Q30	8B
Q31	8C
Q33	9M
Q34	7P
Q201	10P
Q202	7K
Q203	12P
Q204	7J
D1	13C
D2	13B
D3	13C
D4	13C
D5	13D
D6	12B
D17	13D
D18	10M
D19	10M
D20	8B
D21	8B
D26	8C
D28	8C
D31	8B
D34	8C
D35	12F
D38	5H
D200	9Q
D208	6P
D209	7P
D210	7Q

J72-0816-19/29 (A/2)

TK-980/981 PC BOARD

Note : The circuit pattern of J72-0816-19 and J72-0816-29 is the same.

TX-RX UNIT (X57-652X-XX) (A/2)

0-10 : TK-980 0-11 : TK-981

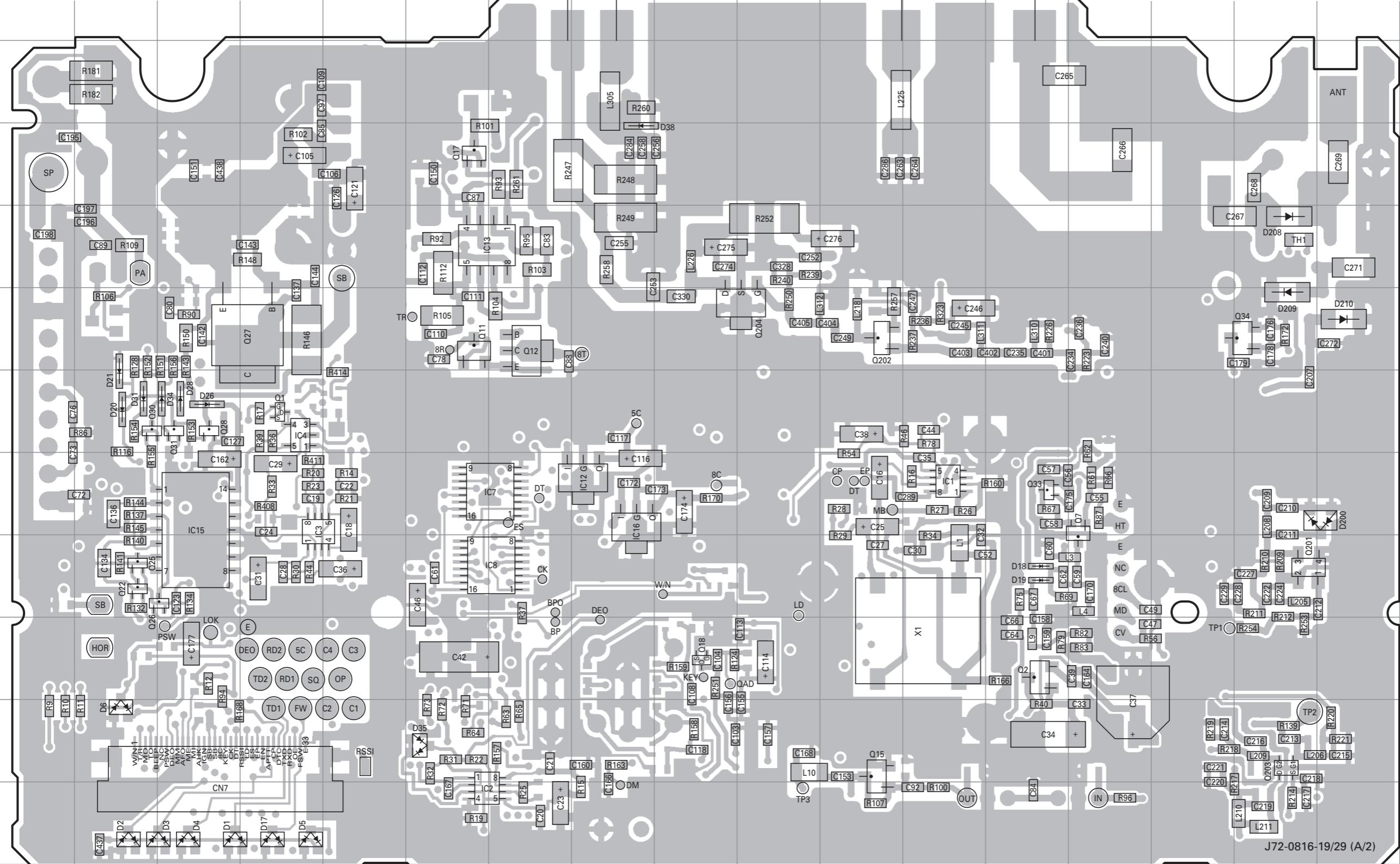
Foil side view (J72-0816-19/29 A/2)

PC BOARD | K-980/981

X-RX UNIT (X57-652X-XX) (A/2)

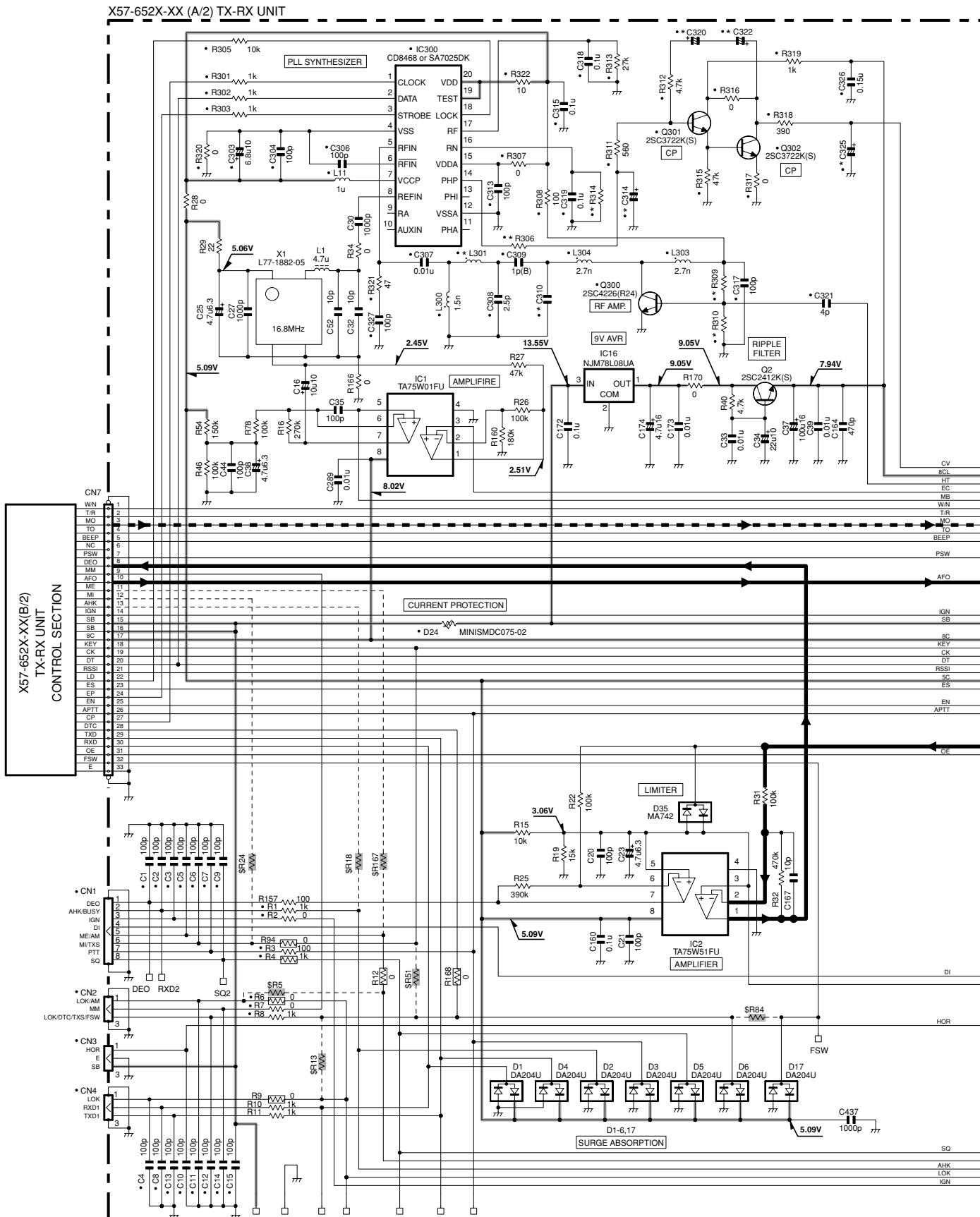
10 : TK-980 0-11 : TK-981

oil side view (J72-0816-19/29 A/2)



Ref. No.	Address
IC1	9L
IC2	13F
IC3	9D
IC4	8D
IC7	9G
IC8	10G
IC12	9H
IC13	6F
IC15	9C
IC16	9H
IC400	2J
Q1	8D
Q2	11M
Q7	9N
Q11	7F
Q12	7G
Q15	12K
Q17	5F
Q18	11I
Q22	10B
Q25	10B
Q26	10C
Q27	7D
Q28	8C
Q30	8B
Q31	8C
Q33	9M
Q34	7P
Q201	10P
Q202	7K
Q203	12P
Q204	7J
D1	13C
D2	13B
D3	13C
D4	13C
D5	13D
D6	12B
D17	13D
D18	10M
D19	10M
D20	8B
D21	8B
D26	8C
D28	8C
D31	8B
D34	8C
D35	12F
D38	5H
D200	9Q
D208	6P
D209	7P
D210	7O

A B C D E TK-980/981 SCHEMATIC DIAGRAM



F

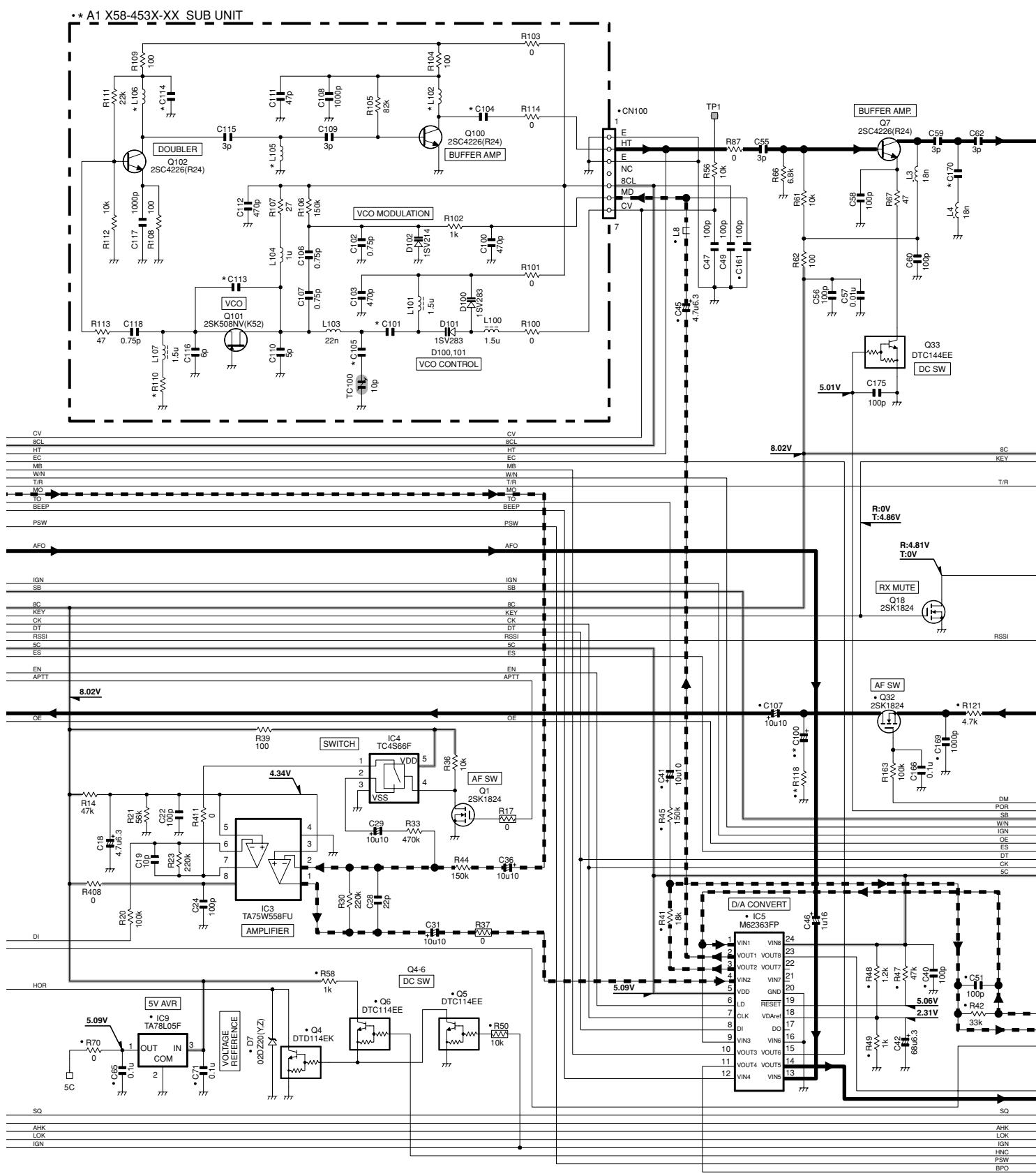
G

H

J

SCHEMATIC DIAGRAM TK-980/981

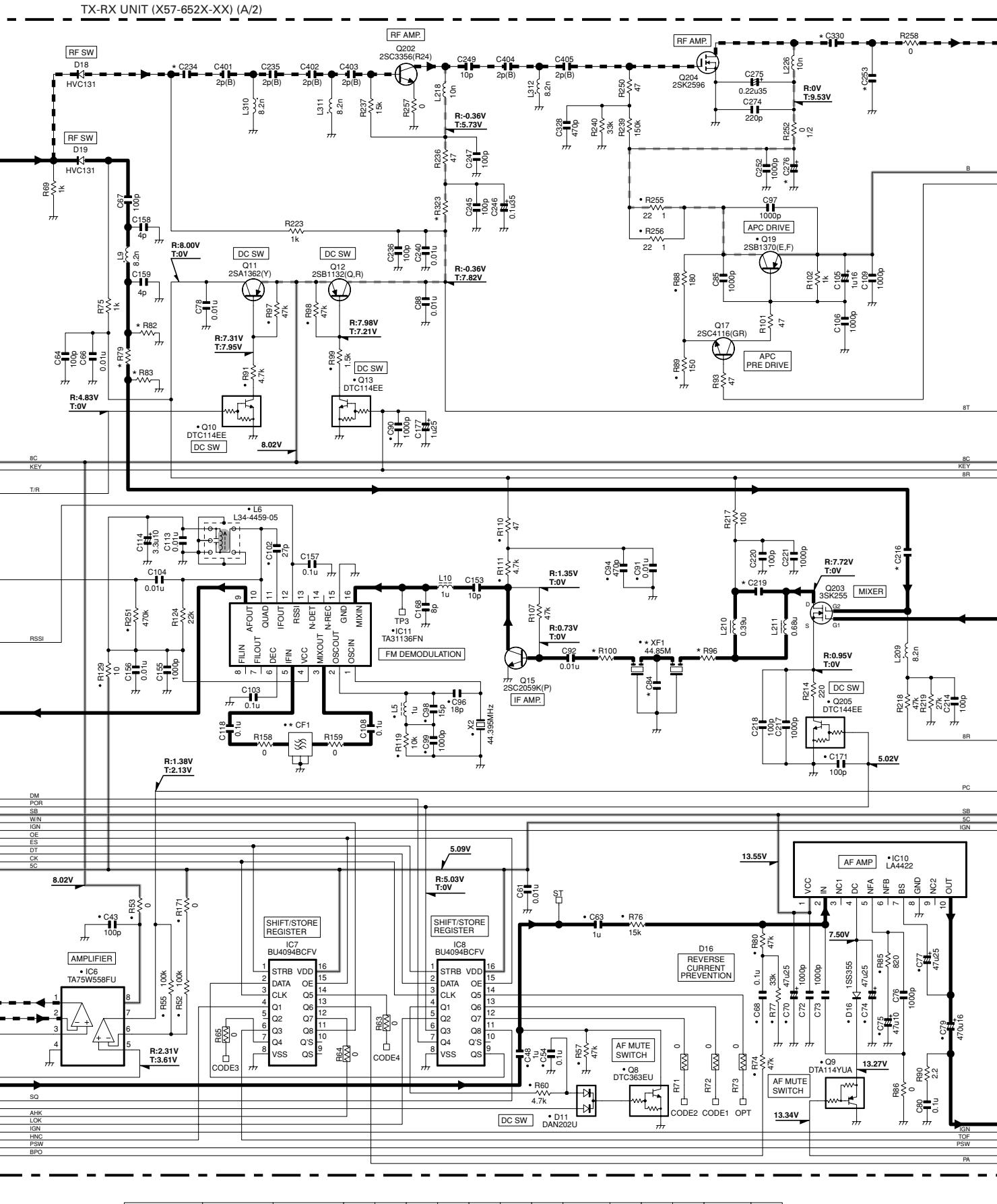
TX-RX UNIT (X57-652X-XX) (A/2)



X58-453X-XX	C101	C104	C105	C113	C114	R110	L102	L105	L106
0-10	TK-980	8p	1.5p	6p	4p	1000p	220	12n	39n
0-11	TK-981	4.5p	1P	4p	5p	470p	180	10n	18n

X57-652X-XX	A1	R118	C100	C170
0-10	TK-980	X58-4530-10	3.9k	10u10
0-11	TK-981	X58-4530-11	NO	5p

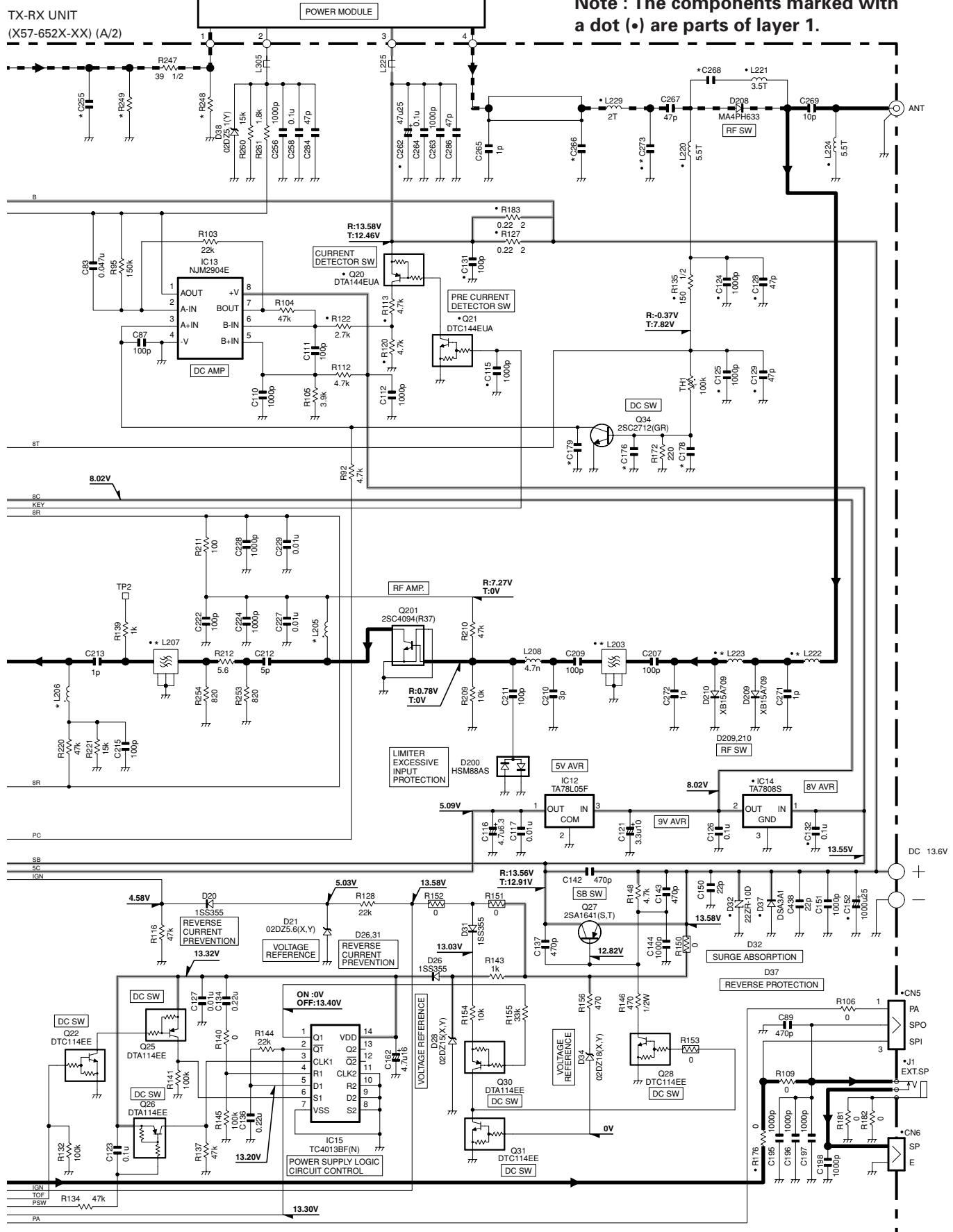
TK-980/981 SCHEMATIC DIAGRAM



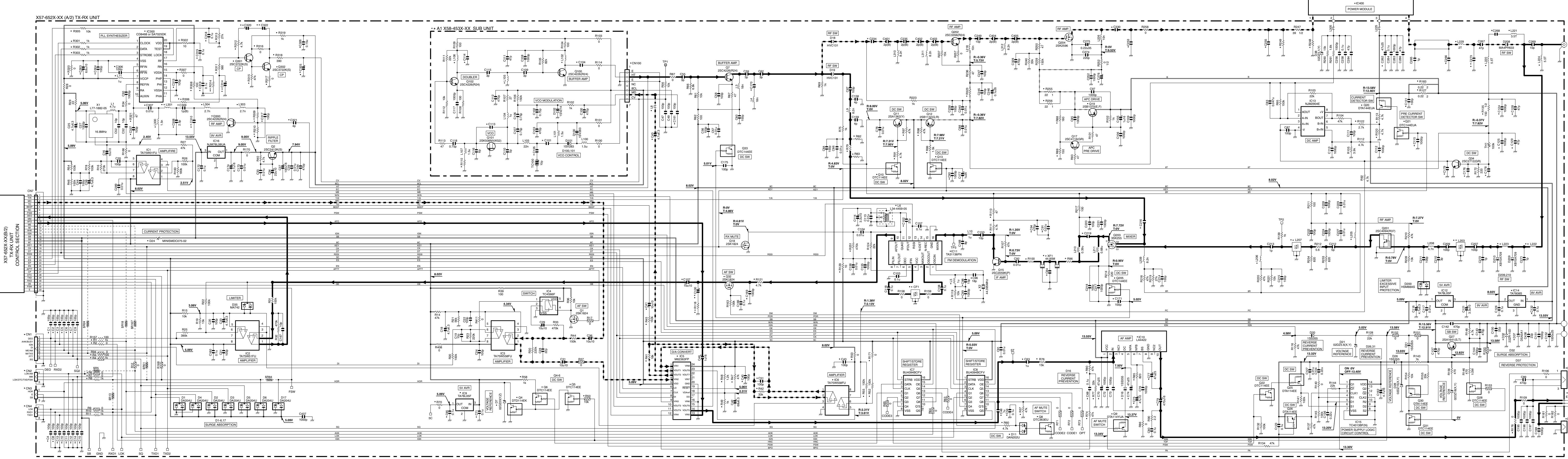
X57-652X-XX	XF1	CF1	R79	R82	R83	R96	R100	R323	C84	C216	C219	C234	C253	C276	C330	
0-10	TK-980	L71-0525-05	L72-0998-05	39	150	150	330	330	47	12p	1.5p(B)	11p	15p	6p	4.7u20	15p
0-11	TK-981	L71-0583-05	L72-0986-05	18	270	270	180	150	68	22p	1p(B)	12p	100p	8p	2.2u20	47p

SCHEMATIC DIAGRAM TK-980/981

Note : The components marked with a dot (•) are parts of layer 1.



X57-652X-XX	IC400	L203	L205	L206	L207	L222	L223	R248	R249	C176	C178	C179	C255	C266	C268	C273
0-10	TK-980	RA20H807M	L79-1465-05	8.2n	8.2n	L79-1465-05	L34-1307-05	120(1/2w)	120(1/2w)	47p	47p	NO	10p	5p	47p	3p
0-11	TK-981	RA20H899M	L79-1467-05	10n	6.8n	L79-1467-05	L34-1313-05	150(1/2w)	150(1/2w)	100p	100p	NO	100p	4p	2p	1p



X57-652X-XX	L301	R306	R309	P310	R314	C314	C320	C322	C325		
0-10	TK-980	4.7n	1k	33k	10k	22k	2.5p	0.1u5	1u25	1u25	1u25
0-11	TK-981	3.9n	470	150k	47k	10k	1.5p	0.068u35	0.4725	0.4725	0.4725

X58-453X-XX	C101	C104	C105	C113	C114	C110	C112	C116	C170		
0-10	TK-980	8p	1.5p	6p	4p	1000p	220	12n	38n	10p	7p(B)
0-11	TK-981	4.5p	1P	4p	5p	470p	180	10n	18n	15n	5p

X57-652X-XX	XF1	CF1	R79	R82	R83	R96	R100	R323	C84	C216	C219	C234	C253	C276	C330	
0-10	TK-980	X58-4530-10	3.9k	39	150	150	330	330	11p	11p	15p	6p	4.7u20	15p		
0-11	TK-981	X58-4530-11	NO	NO	NO	NO	NO	270	180	150	68	12p	100p	8p	2.2u20	47p

X57-652X-XX	XF10	CF11	R791	R821	R831	R961	R1001	R3231	C841	C2161	C2191	C2341	C2531	C2761	C3301	
0-10	TK-980	X58-4530-10	3.9k	39	150	150	330	330	11p	11p	15p	6p	4.7u20	15p		
0-11	TK-981	X58-4530-11	NO	NO	NO	NO	NO	270	180	150	68	12p	100p	8p	2.2u20	47p

X57-652X-XX	IC400	L203	L205	L206	L207	L222	L223	L224	R248	R249	C176	C178	C255	C266	C273	
0-10	TK-980	RA20H899M	L79-1465-05	8.2n	8.2n	L79-1465-05	L34-1307-05	L34-1313-05	120(1/2w)	47p	47p	10p	10p	4p	2p	2p
0-11	TK-981	RA20H899M	L79-1465-05	10n	6.8n	L79-1465-05	L34-1307-05	L34-1313-05	150(1/2w)	100p	100p	NO	NO	4p	2p	1p

KENWOOD CORPORATION

2967-3, Ishikawa-machi, Hachioji-shi, Tokyo, 192-8525 Japan

KENWOOD U.S.A. CORPORATION

P.O. BOX 22745, 2201 East Dominguez Street, Long Beach, CA 90801-5745, U.S.A.

KENWOOD ELECTRONICS CANADA INC.

6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

KENWOOD ELECTRONICS DEUTSCHLAND GMBH

Rembrücke Str. 15, 63150 Heusenstamm, Germany

KENWOOD ELECTRONICS BELGIUM N.V.

Leuvensesteenweg 248 J, 1800 Vilvoorde, Belgium

KENWOOD ELECTRONICS FRANCE S.A.

13, Boulevard Ney, 75018 Paris, France

KENWOOD ELECTRONICS U.K. LIMITED

KENWOOD House, Dwight Road, Watford, Herts., WD18 9EB United Kingdom

KENWOOD ELECTRONICS EUROPE B.V.

Amsterdamseweg 37, 1422 AC Uithoorn, The Netherlands

KENWOOD ELECTRONICS ITALIA S.p.A.

Via G. Sirtori, 7/9 20129 Milano, Italy

KENWOOD IBERICA S.A.

Bolivia, 239-08020 Barcelona, Spain

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD.

(A.C.N. 001 499 074)

16 Giffnock Avenue, Centrecourt Estate, North Ryde, N.S.W. 2113 Australia

KENWOOD ELECTRONICS (HONG KONG) LTD.

Unit 3712-3724, Level 37, Tower one Metroplaza, 223 Hing Fong Road, Kwai Fong, N.T., Hong Kong

KENWOOD ELECTRONICS SINGAPORE PTE LTD.

1 Ang Mo Kio Street 63, Singapore 569110