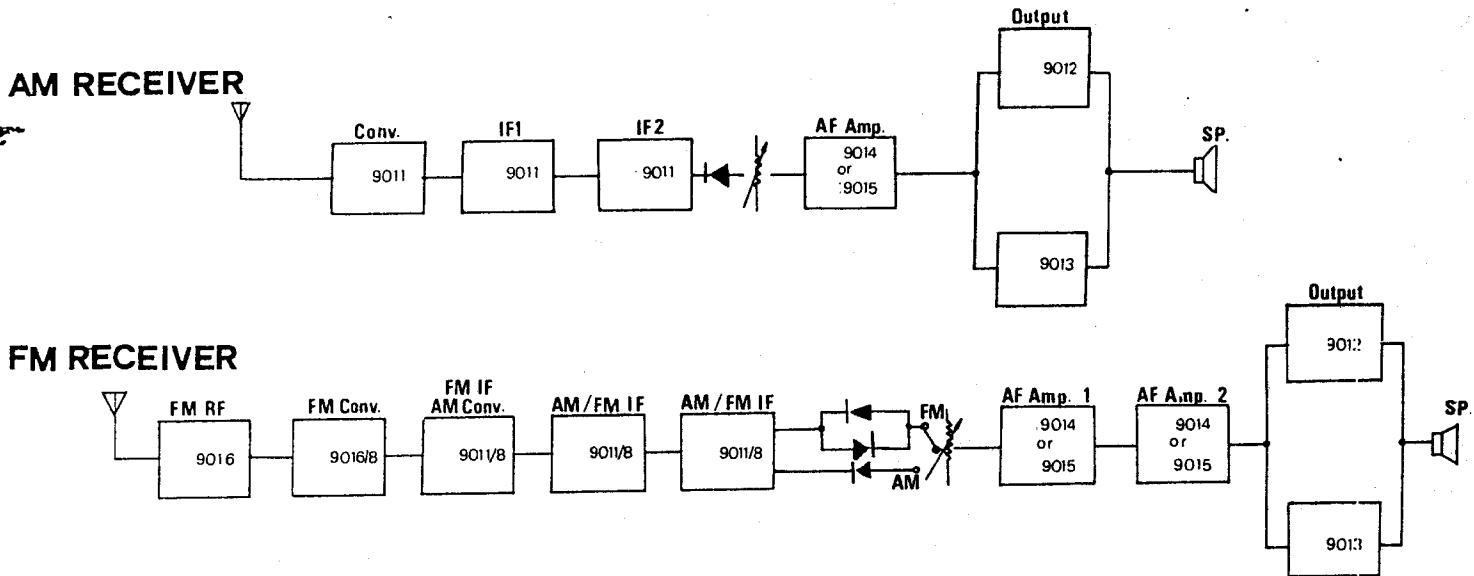
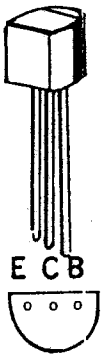


SELECTION GUIDE FOR AM / FM RADIO TRANSISTOR KIT



TYPE	POLARITY	APPLICATIONS	CASE
CL 9011	NPN	AM / FM IF , AM CONVERTER	TO-92B 
CL 9012	PNP	AUDIO POWER OUTPUT	
CL 9013	NPN	AUDIO POWER OUTPUT	
CL 9014	NPN	AUDIO DRIVER	
CL 9015	PNP	AUDIO DRIVER	
CL 9016	NPN	FM RF	
CL 9018	NPN	AM / FM IF , FM CONVERTER	



MICRO ELECTRONICS LTD. 美科有限公司

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DEVICE SPECIFICATIONS (TA = 25°C unless otherwise specified)

TYPE	MAXIMUM RATINGS				ELECTRICAL CHARACTERISTICS																					
	V _{GB0} (V)	V _{CE0} (V)	V _{EB0} (V)	P _D (mW)	HFE		I _{GB0} (nA)	V _{CE} (V)	I _C (mA)	V _{CE} (V)	V _{CE(sat)} (V)	I _C (mA)	I _B (mA)	f _T (MHz)	I _C (mA)	V _{CE} (V)	C _{ob} (pF)	V _{CE} (V)	C _{trb} / (pSec)	NF (dB)						
CL 9011	25	20	3	300	28	198	50	18	0.67	0.85	1	5	0.08	0.5	10	1	150	220	1	5	19	2.5	10	22	3 ^{2/}	
CL 9012	25	20	5	500	64	350	500	18	0.7	0.85	10	1	0.2	0.6	250	25										
CL 9013	25	20	5	500	64	350	500	18	0.7	0.85	10	1	0.2	0.6	250	25										
CL 9014	25	20	5	500	60	1000	50	18	0.63	0.85	1	5	0.07	0.5	10	1	50	140	1	5	2.7	6	10		2 ^{3/}	
CL 9015	25	20	5	500	60	1000	50	18	0.64	0.85	1	5	0.07	0.5	10	1	50	120	1	5	3.5	6	10		2 ^{3/}	
CL 9016	25	20	3	300	28	198	50	18	0.72	0.85	1	5	0.14	0.5	10	1	500	800	5	5	11	1.6	10	12	3 ^{4/}	
CL 9018	20	15	3	300	28	198	50	18	0.72	0.85	1	5	0.14	0.5	10	1	400	800	5	5	1.3	1.7	10	18		

$1/ : C_{trb} @ I_C = 1 \text{ mA} \quad V_{CE} = 5 \text{ V} \quad f = 31.8 \text{ MHz}$
 $2/ : NF @ I_C = 1 \text{ mA} \quad V_{CE} = 5 \text{ V} \quad R_G = 500 \Omega \quad f = 1 \text{ MHz}$
 $3/ : NF @ I_C = 0.1 \text{ mA} \quad V_{CE} = 5 \text{ V} \quad R_G = 10 \text{ k} \Omega \quad f = 30 \text{ Hz to } 15 \text{ kHz}$
 $4/ : NF @ I_C = 1 \text{ mA} \quad V_{CE} = 5 \text{ V} \quad R_G = 50 \Omega \quad f = 100 \text{ MHz}$

CLASSIFICATION OF HFE GROUPS

TYPE NO.	GROUP									@ I _C / V _{CE}
	A	B	C	D	E	F	G	H	I	
CL 9011 CL 9016 CL 9018				28 - 45	39 - 60	54 - 80	72 - 108	97 - 146	132 - 198	1 mA / 5V
CL 9014 CL 9015	60 - 150	100 - 300	200 - 600	400 - 1000						1 mA / 5V
CL 9012 CL 9013				64 - 91	78 - 112	96 - 135	118 - 166	144 - 202	180 - 350	50 mA / 1V