MITSUBISHI ELECTRIC CORP.

SPEC. SHEET	Drawn	M. Koyama		A		B		C	
	Approved	K. Kurosaki Dec '85							

Type No.	2SC2312
Application	RF POWER AMPLIFICATION
Structure	NPN Silicon Epitaxial Planar Type Transistor
Outline	Fig. 1

Absolute max. ratings	V_{CBO}	V_{EBO}	V_{CEO}	I_C	$I_{\_\_}$	P_C	$P_{\_\_}$	Tj	Tstg	T_C
Condition			$R_{BE}=\infty$			$T_C=25℃$	$T_a=25℃$			$25℃ \pm 3℃$
Limits	60 V	5 V	20 V	6 A	___ A	25 W	___ W	+150℃	-55 ℃ +150℃	

Parameter	Symbol	Conditions	Values MIN.	Values TYP.	Values MAX.	Unit	AQL (%)
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=5mA$ $I_C=0$	5			V	0.65
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA$ $I_E=0$	60			V	0.65
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA$ $R_{BE}=\infty$	20			V	0.65
Collector Cutoff Current	I_{CBO}	$V_{CB}=30V$ $I_E=0$			500	μA	0.65
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V$ $I_C=0$			100	μA	0.65
DC Forward Current Transfer Ratio	H_{FE} *1,2	$V_{CE}=10V$ $I_C=1A$	35		180	—	0.65
Output Power	P_O	Vcc=12V,f=27MHz,Pin=1.5W	17	18.5		W	0.65
Collector Efficiency	η_C	Same as above	60	70		%	0.65
Load VSWR *3							

Notes: 1. Pulsed test.

2. See Table 1. hFE Classification.

3. Open and short test at the output terminal of the test circuit when operated at Vcc=16V,f=27MHz,Po=20W.

Table 1. hFE Classification

Item	hFE	Ident.
B	35 - 70	BB
C	55 - 110	CC
D	90 - 180	DD

Fig.1 Outline Drawing.

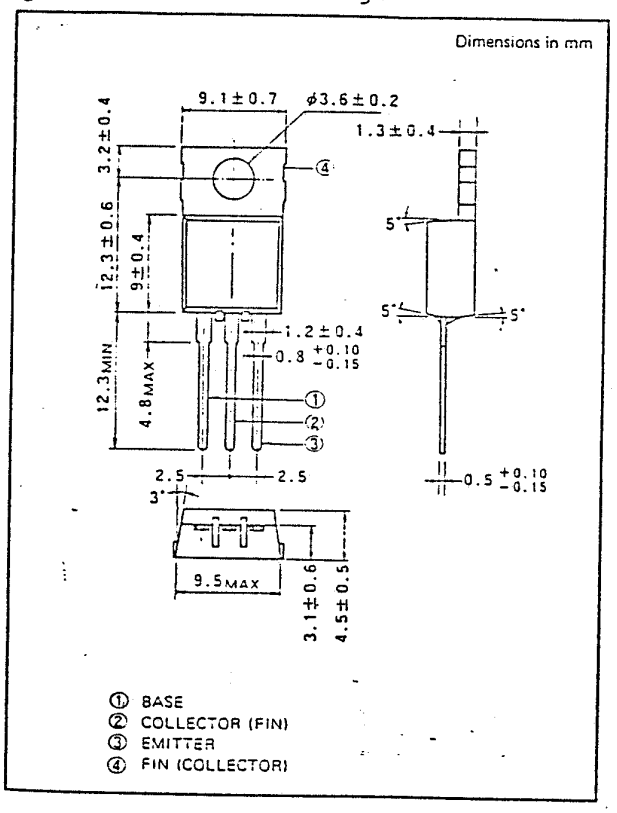
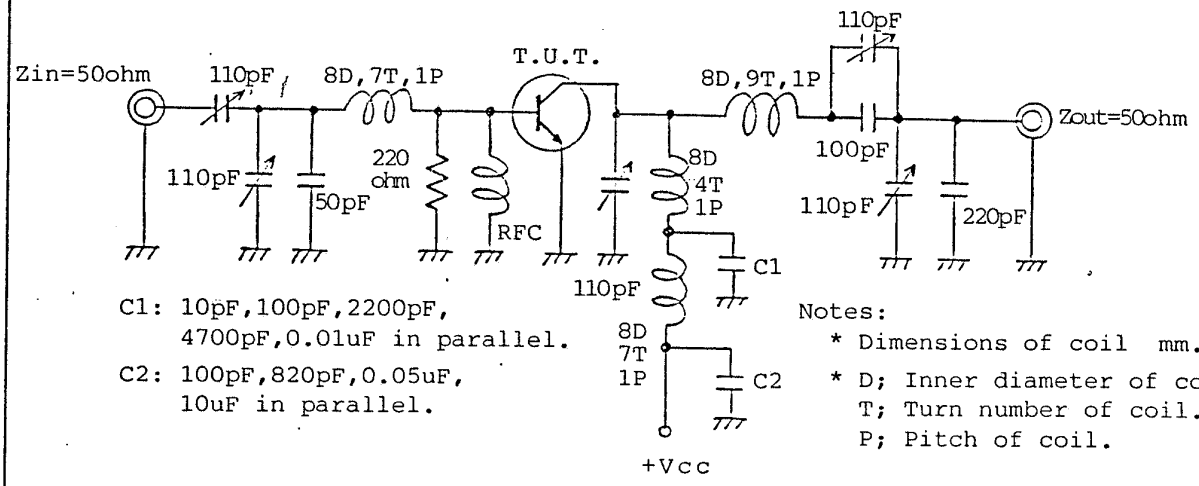


Fig.2 Test Circuit.



C1: 10pF,100pF,2200pF, 4700pF,0.01uF in parallel.

C2: 100pF,820pF,0.05uF, 10uF in parallel.

Notes:

* Dimensions of coil mm.
* D; Inner diameter of coil.
  T; Turn number of coil.
  P; Pitch of coil.