

DESCRIPTION

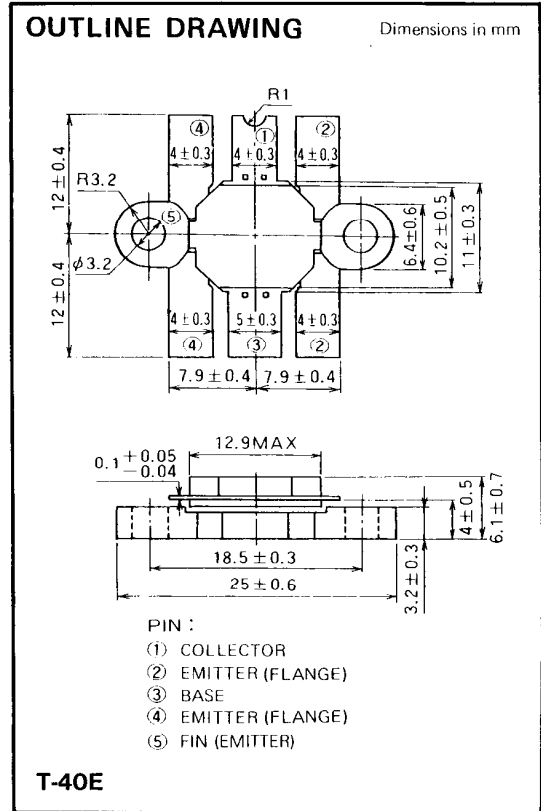
2SC3908 is a silicon NPN epitaxial planar type transistor designed for HF power amplifiers applications.

FEATURES

- High power gain: $G_{pe} \geq 11.5\text{dB}$
@ $P_O = 100\text{W}$, $f = 30\text{MHz}$, $V_{CC} = 12.5\text{V}$
- The ability withstand infinite VSWR when operated at $f = 30\text{MHz}$, $V_{CC} = 12.5\text{V}$, $P_O = 100\text{W}$.
- Flange type ceramic package.

APPLICATION

For output stage of 100 – 150W power amplifiers in HF band SSB mobile radio sets. (Push-pull operation)



ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise specified)

Symbol	Parameter	Conditions	Rating	Unit
V _{CB0}	Collector to base voltage		50	V
V _{EB0}	Emitter to base voltage		5	V
V _{CE0}	Collector to emitter voltage	R _{BE} = ∞	20	V
I _C	Collector current		22	A
P _C	Collector dissipation	T _a = 25°C	7.8	W
		T _C = 25°C	200	W
T _J	Junction temperature		175	°C
T _{stg}	Storage temperature		-55 to 175	°C
R _{th-a}	Thermal resistance		19.2	°C/W
R _{th-c}			0.75	°C/W

Note. Above parameters are guaranteed independently.

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise specified)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V _{(BR)EBO}	Emitter to base breakdown voltage	I _C = 20 mA, I _E = 0	50			V
V _{(BR)CBO}	Collector to base breakdown voltage	I _E = 20 mA, I _C = 0	5			V
V _{(BR)CEO}	Collector to emitter breakdown voltage	I _C = 0.1 A, R _{BE} = ∞	20			V
I _{CBO}	Collector cutoff current	V _{CB} = 15 V, I _E = 0			5	mA
I _{EBO}	Emitter cutoff current	V _{EB} = 3 V, I _C = 0			5	mA
h _{FE}	DC forward current gain	V _{CE} = 10 V, I _C = 1 A	10	50	180	—
P _O	Output power	f = 30 MHz, V _{CC} = 12.5 V, P _{in} = 7 W	100	110		W
η _C	Collector efficiency		55	60		%

Note : Above parameters , ratings , limits and conditions are subject to change.