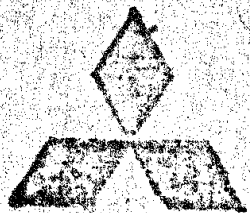


MITSUBISHI  
ELECTRIC CO.



# RF POWER TRANSISTOR

## 2SC1964

### GENERAL DISCRPTION

MITSUBISHI 2SC1964 is a silicon NPN epitaxial planar type transistor specifically designed for power amplifiers operating in HF band.

### FEATURES

1. High Gain:  $G_{po}=8.8\text{dB}(\text{min.})$  @27MHz, 12V,  $P_{in}=0.4\text{W}$ ,  $I_{c}\leq 0.42\text{A}$ .
2. The ability to withstand infinite VSWR at all phase angles when operated rated output power (100% AM) and  $V_{cc}=16\text{V}$ .
3. IMD:  $-30\text{dB}$  or better @  $P_{o}=5\text{W}$ ,  $V_{cc}=12\text{V}$ .

### APPLICATION

Especially suitable for the output stage of 27MHz AM 5W transceiver sets.

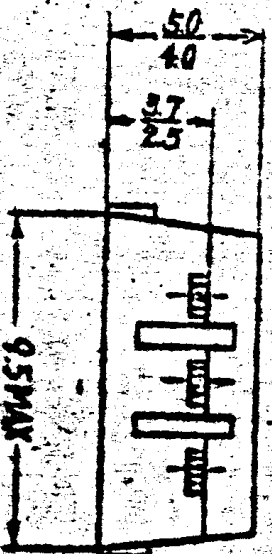
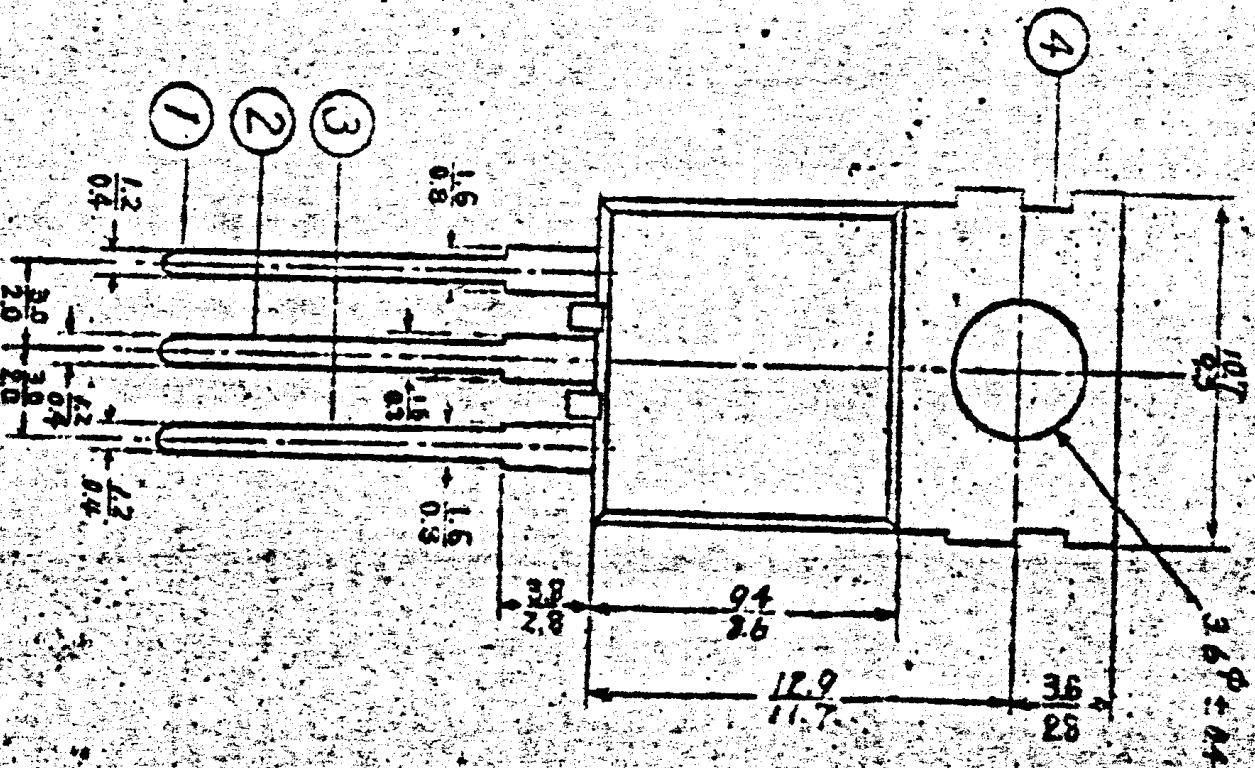
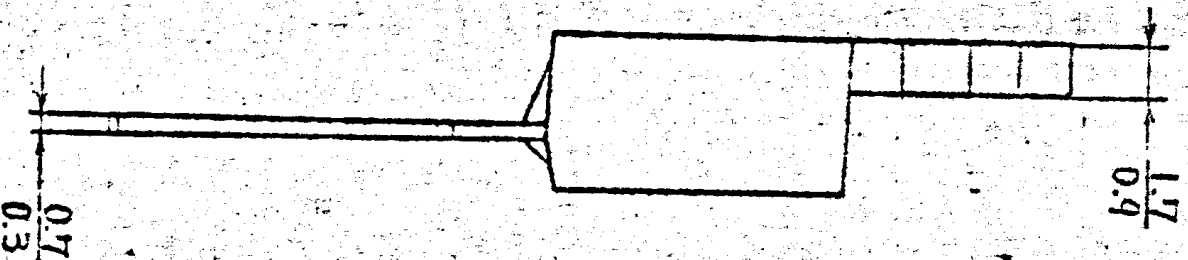
MITSUBISHI ELECTRIC CORPORATION IN JAPAN

TRANSISTOR SPEC. SHEET	DRAWN								
	APPROVED								

Type	2SC1964								
Application	For RF Power Amplifiers								
Structure	Silicon NPN Epitaxial Planar Type Transistor								
Outline	Fig. 1								

	$V_{CBO}$	$V_{EBO}$	$V_{CEO}$	$I_C$	$I_E$	$P_C$	$P$	$T_j$	$T_{stg}$	$T_c$
			$R_{BE} = \infty$			$T_c = 50^\circ C$				$25 \pm 1^\circ C$
Max. Ratings	80 V	4 V	40 V	3.5A	— A	10 W	— W	+150 °C	-65~+150 °C	

Characteristics	Symbol	Test Conditions	Limits			Unit
			Min.	Typ.	Max.	
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1mA$	80			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1mA$	4			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, R_{BE} = \infty$	40			V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 30V$			500	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 3V$			500	$\mu A$
DC Forward Current Transfer Ratio	$h_{FE}$	$V_{CE} = 10V, I_C = 0.1A$	10	50	180	—
Output Power	$P_C$	$V_{CC}=12V, f=27MHz, P_{in}=0.4W, I_C \leq 420mA$	3	3.4		W



1 BASE

2 COLLECTOR

3 EMITTER

4 COLLECTOR

All dimensions are shown in mm