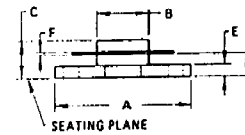
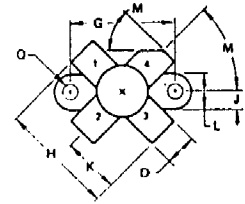


**2N6370**  
NPN SILICON RF POWER TRANSISTOR

**\*MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CE0}$	35	Vdc
Collector-Base Voltage	$V_{CB0}$	65	Vdc
Emitter-Base Voltage	$V_{EB0}$	4.0	Vdc
Collector Current - Continuous	$I_C$	1.5	Adc
Total Device Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$	$P_D$	20 0.114	Watts W/°C
Storage Temperature Range	$T_{stg}$	-65 to +200	°C

\*Indicates JEDEC Registered Data



STYLE 1:  
PIN 1. EMITTER  
2. BASE  
3. EMITTER  
4. COLLECTOR

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	24.64	24.89	0.970	0.980
B	9.40	9.91	0.370	0.390
C	5.87	7.14	0.229	0.281
D	5.46	5.97	0.215	0.235
E	2.16	2.67	0.085	0.105
F	0.10	0.15	0.004	0.006
G	18.29	18.54	0.720	0.730
H	20.07	20.57	0.790	0.810
K	10.03	10.29	0.395	0.405
L	6.22	6.48	0.245	0.255
M	40°	50°	40°	50°
N	3.81	4.57	0.150	0.180
O	2.87	3.30	0.113	0.130

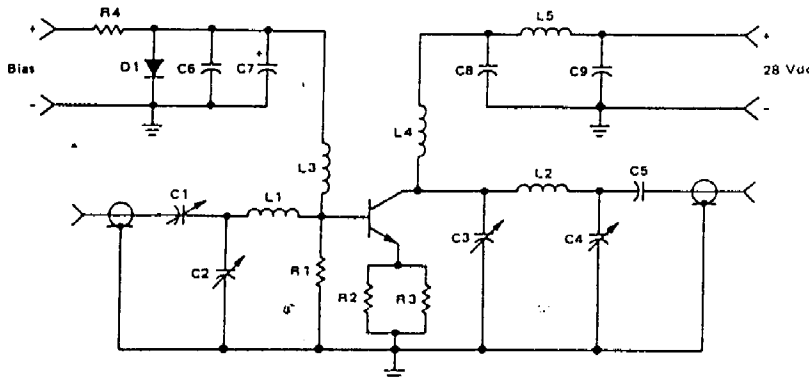
**\*ELECTRICAL CHARACTERISTICS ( $T_C = 25^\circ C$  unless otherwise noted)**

Characteristics	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Collector-Emitter Breakdown Voltage ( $I_C = 50 \text{ mAdc}$ , $I_B = 0$ )	$BV_{CE0}$	35	-	Vdc
Collector-Emitter Breakdown Voltage ( $I_C = 50 \text{ mAdc}$ , $V_{BE} = 0$ )	$BV_{CES}$	65	-	Vdc
Emitter-Base Breakdown Voltage ( $I_E = 5.0 \text{ mAdc}$ , $I_C = 0$ )	$BV_{EB0}$	4.0	-	Vdc
Collector Cutoff Current ( $V_{CE} = 28 \text{ Vdc}$ , $V_{BE} = 0$ , $T_C = +55^\circ C$ )	$I_{CES}$	-	10	mAdc
<b>ON CHARACTERISTICS</b>				
DC Current Gain ( $I_C = 0.5 \text{ Adc}$ , $V_{CE} = 5.0 \text{ Vdc}$ )	$h_{FE}$	5.0	50	-
<b>DYNAMIC CHARACTERISTICS</b>				
Current-Gain - Bandwidth Product ( $I_C = 0.5 \text{ Adc}$ , $V_{CE} = 15 \text{ Vdc}$ , $f = 50 \text{ MHz}$ )	$f_T$	50	-	MHz
Output Capacitance ( $V_{CB} = 28 \text{ Vdc}$ , $I_E = 0$ , $f = 1.0 \text{ MHz}$ )	$C_{ob}$	-	40	pF
<b>FUNCTIONAL TEST</b>				
Common-Emitter Amplifier Power Gain (Figure 1) ( $P_{out} = 10 \text{ W(PEP)}$ , $I_C = 470 \text{ mAdc Max}$ , $V_{CC} = 28 \text{ Vdc}$ , $f_1 = 30 \text{ MHz}$ , $f_2 = 30.001 \text{ MHz}$ )	$G_{PE}$	12	-	dB
Intermodulation Distortion Ratio (Figure 1) (1) ( $P_{out} = 10 \text{ W(PEP)}$ , $I_C = 470 \text{ mAdc Max}$ , $V_{CC} = 28 \text{ Vdc}$ , $f_1 = 30 \text{ MHz}$ , $f_2 = 30.001 \text{ MHz}$ )	IMD	-	-30	dB
Collector Efficiency ( $P_{out} = 10 \text{ W(PEP)}$ , $I_C = 470 \text{ mAdc Max}$ , $V_{CC} = 28 \text{ Vdc}$ , $f_1 = 30 \text{ MHz}$ , $f_2 = 30.001 \text{ MHz}$ )	$\eta$	38	-	%

\*Indicates JEDEC Registered Data.

(1) To MIL STD 1311 Version A, Test Method 2204, Two Tone, Reference Each Tone

FIGURE 1 - 30 MHz TEST CIRCUIT



C1	80 - 480 pF	ARCO 466 or equivalent	L2	5 Turns, #18 AWG, 1/4" I.D., 5/16" Long (0.13 μH)
C2, C3, C4	170 - 780 pF	ARCO 469 or equivalent	L3	10 μH
C5	0.1 μF		L4	1.0 μH
C6, C9	0.01 μF		L5	RFC VK200 FERROXCUBE
C7	500 μF	TANTALUM or equivalent	R1	10 OHMS 1/2 WALLEN BRADLEY or equivalent
C8	2000 pF	UNELCO or equivalent	R2, R3	1.5 OHMS 1/2 WALLEN BRADLEY or equivalent