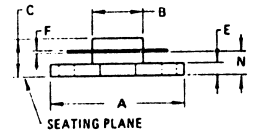
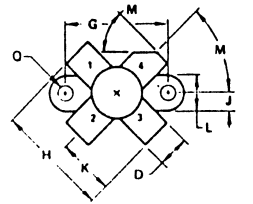


2N6370
 NPN SILICON RF POWER TRANSISTOR

***MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	35	Vdc
Collector-Base Voltage	V _{CBO}	65	Vdc
Emitter-Base Voltage	V _{EBO}	4.0	Vdc
Collector Current - Continuous	I _C	1.5	Adc
Total Device Dissipation @ T _C = 25°C Derate above 25°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	5.82	7.14	0.229	0.281
D	5.46	5.97	0.215	0.235
E	2.76	2.87	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	4.09	5.09	0.160	0.200
N	3.81	4.57	0.150	0.180
Q	2.87	3.30	0.113	0.130

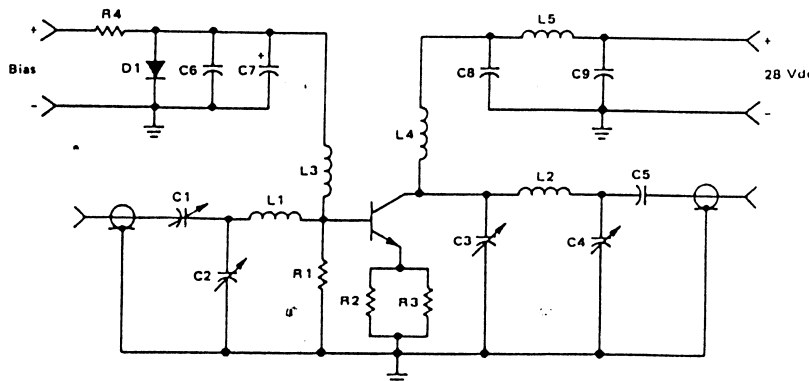
***ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)**

Characteristics	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (I _C = 50 mA, I _B = 0)	BV _{CEO}	35	-	Vdc
Collector-Emitter Breakdown Voltage (I _C = 50 mA, V _{BE} = 0)	BV _{CES}	65	-	Vdc
Emitter-Base Breakdown Voltage (I _E = 5.0 mA, I _C = 0)	BV _{EBO}	4.0	-	Vdc
Collector Cutoff Current (V _{CE} = 28 Vdc, V _{BE} = 0, T _C = +55°C)	I _{CES}	-	10	mA
ON CHARACTERISTICS				
DC Current Gain (I _C = 0.5 A, V _{CE} = 5.0 Vdc)	h _{FE}	5.0	50	-
DYNAMIC CHARACTERISTICS				
Current-Gain - Bandwidth Product (I _C = 0.5 A, V _{CE} = 15 Vdc, f = 50 MHz)	f _T	50	-	MHz
Output Capacitance (V _{CB} = 28 Vdc, I _E = 0, f = 1.0 MHz)	C _{ob}	-	40	pF
FUNCTIONAL TEST				
Common-Emitter Amplifier Power Gain (Figure 1) (P _{out} = 10 W(PEP), I _C = 470 mA Max, V _{CC} = 28 Vdc, f ₁ = 30 MHz, f ₂ = 30.001 MHz)	G _{PE}	12	-	dB
Intermodulation Distortion Ratio (Figure 1) (1) (P _{out} = 10 W(PEP), I _C = 470 mA Max, V _{CC} = 28 Vdc, f ₁ = 30 MHz, f ₂ = 30.001 MHz)	IMD	-	-30	dB
Collector Efficiency (P _{out} = 10 W(PEP), I _C = 470 mA Max, V _{CC} = 28 Vdc, f ₁ = 30 MHz, f ₂ = 30.001 MHz)	η	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 | RF C VK200 FERROXCUBE |
| C7 | 500 μF | TANTALUM or equivalent | R1 | 10 OHMS 1/2 W ALLEN BRADLEY or equivalent |
| C8 | 2000 pF | UNELCO or equivalent | R2, R3 | 1.5 OHMS 1/2 W ALLEN BRADLEY or equivalent |