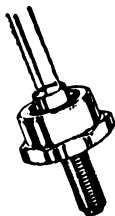


2N3924 (SILICON)
 thru
2N3927

NPN silicon annular RF power transistors, optimized for large-signal power-amplifier and driver applications to 300 MHz.



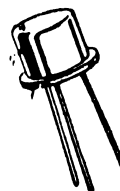
Collector electrically connected to case; stud electrically isolated from case

2N3925
 (TO-102)



2N3926
 2N3927
 (TO-60)

Stud and case electrically connected to emitter

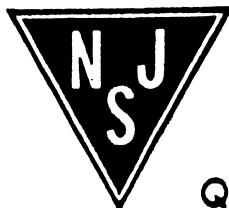


2N3924
 (TO-39)

Collector connected to case

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	2N3924	2N3925	2N3926	2N3927	Unit
Collector-Emitter Voltage	V_{CEO}	18	18	18	18	Vdc
Collector-Base Voltage	V_{CB}	36	36	36	36	Vdc
Emitter-Base Voltage	V_{EB}	4.0	4.0	4.0	4.0	Vdc
Collector Current	I_C	0.5	1.0	1.5	3.0	Adc
Power Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	7.0 40	10 57.1	11.6 66.3	23.2 132.5	Watts mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	← -65 to +200 →				$^\circ\text{C}$



Quality Semi-Conductors

2N3924 thru 2N3927 (continued)

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Conditions	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Collector-Emitter Sustaining Voltage (1)	I _C = 200 mAdc	BV _{CEO(sus)}	18	-	-	Vdc
Collector-Base Breakdown Voltage	I _C = 0.25 mAdc, I _E = 0	BV _{CBO}	38	-	-	Vdc
	I _C = 0.50 mAdc, I _E = 0					
Emitter-Base Breakdown Voltage	I _E = 1.0 mAdc, I _C = 0	BV _{EB0}	4.0	-	-	Vdc
	I _E = 2.0 mAdc, I _C = 0					
Collector Cutoff Current	V _{CB} = 15 Vdc, I _E = 0	I _{CBO}	-	-	0.1	mAdc
	V _{CB} = 15 Vdc, I _E = 0, T _A = 150°C					
					0.25	
					5.0	
					10	

DYNAMIC CHARACTERISTICS

Current-Gain - Bandwidth Product	I _C = 100 mAdc, V _{CE} = 13.6 Vdc, f = 100 MHz	f _T	-	350	-	MHz
	2N3924 thru 2N3926					
	I _C = 200 mAdc, V _{CE} = 13.6 Vdc, f = 100 MHz					
				350		
Output Capacitance	V _{CB} = 13.6 Vdc, I _E = 0, f = 100 kHz	C _{ob}	-	12.5	20	pF
				25	45	

FUNCTIONAL TESTS

Test	Conditions	Symbol	Min	Typ	Max	Unit
Power Input	Test Circuit Figure 1	P _{in}	-	-	1.0	Watts
Common-Emitter Amplifier Power Gain	V _{CE} = 13.6 Vdc, R _B = 50 ohms, R _L = 50 ohms, f = 175 MHz	G _{pe}	6.0	7.3	-	dB
Collector Efficiency	P _{out} = 4.0 Watts	η	70	-	-	%

2N3924

Power Input	Test Circuit Figure 1	P _{in}	-	-	1.3	Watts
Common-Emitter Amplifier Power Gain	V _{CE} = 13.6 Vdc, R _B = 50 ohms, R _L = 50 ohms, f = 175 MHz	G _{pe}	5.84	6.5	-	dB
Collector Efficiency	P _{out} = 6.0 Watts	η	70	-	-	%

2N3926

Power Input	Test Circuit Figure 1	P _{in}	-	-	2.0	Watts
Common-Emitter Amplifier Power Gain	V _{CE} = 13.6 Vdc, R _B = 50 ohms, R _L = 50 ohms, f = 175 MHz	G _{pe}	5.44	6.0	-	dB
Collector Efficiency	P _{out} = 7.0 Watts	η	70	-	-	%

2N3927

Power Input	Test Circuit Figure 1	P _{in}	-	-	4.0	Watts
Common-Emitter Amplifier Power Gain	V _{CE} = 13.6 Vdc, R _B = 50 ohms, R _L = 50 ohms, f = 175 MHz	G _{pe}	4.77	5.0	-	dB
Collector Efficiency	P _{out} = 12 Watts	η	80	-	-	%

(1) Pulsed thru a 25-mH inductor (See Figure 2)

FIGURE 1 - 175 MHz TEST CIRCUIT

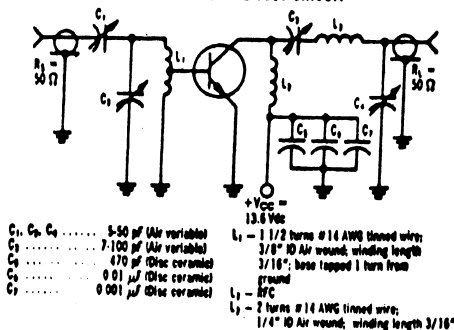


FIGURE 2 - PULSE TEST CIRCUIT

