

2N5177

SILICON BIPOLAR NPN POWER TRANSISTOR 17 W, in the 100 – 500 MHz Frequency Range

The silicon bipolar n-p-n transistor is designed for power amplifier, frequency multiplier or auto-oscillator applications in industrial equipment.

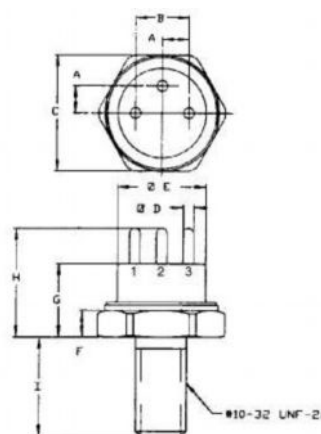
Features (At 500 MHz):

- Output Power: 17 W
- Power Gain: 3 dB Min
- Efficiency: 45% Min

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Collector–Emitter Voltage	V_{CEO}	35	V_{DC}
Collector-Base Voltage	V_{CBO}	55	V_{DC}
Emitter–Base Voltage	V_{EBO}	3.5	V_{DC}
Collector Current	I_C	2	A_{DC}
Operation Junction Temperature	T_j	-65 ÷ +200	°C
Storage Temperature Range	T_{STG}	-65 ÷ +150	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	5	°C/W
Total Power Dissipation, $T_C=25^\circ C$	P_D	40	W

PACKAGE STYLE TO-60



	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.090/2,29	.110/2,79
B	.185/4,70	.215/5,46
C	.420/10,67	.440/11,18
D	.030/0,76	.046/1,17
E	.320/8,13	.360/9,14
F	.090/2,29	.135/3,43
G	.215/5,46	.320/8,13
H		.480/12,19
I	.420/10,67	.455/11,56

1 = EMITTER 2 = BASE
3 = COLLECTOR CASE = EMITTER

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage ($I_C = 200 \text{ mA}$, $I_B = 0 \text{ A}$)	$V_{(BR)CEO}$	35	—	—	V_{DC}
Collector–Emitter Breakdown Voltage ($I_C = 20 \text{ mA}$, $V_{BE} = 0 \text{ V}$)	$V_{(BR)CER}$	55	—	—	V_{DC}
Emitter–Base Breakdown Voltage ($I_E = 2.5 \text{ mA}$, $I_C = 0 \text{ A}$)	$V_{(BR)EBO}$	3.5	—	—	V_{DC}
Collector–Base Leakage Current ($V_{CB} = 15 \text{ V}$, $I_E = 0 \text{ A}$)	I_{CBO}	—	—	1	mA_{DC}
DC Current Gain ($V_{CE} = 5 \text{ V}$, $I_C = 0.25 \text{ A}$)	h_{FE}	10	—	100	
Output Capacitance ($V_{CB} = 15 \text{ V}$, $I_C = 0 \text{ A}$, $f = 1 \text{ MHz}$)	C_{OB}	—	—	20	pF
Power Gain ($V_{CE} = 28 \text{ V}$, $P_{OUT} = 17 \text{ W}$, $f = 500 \text{ MHz}$)	G_p	3	—	—	dB
Drain Efficiency ($V_{CE} = 28 \text{ V}$, $P_{OUT} = 17 \text{ W}$, $f = 500 \text{ MHz}$)	η_C	45	—	—	%

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Specification is subject to change without notice