

**2N6081**

## SILICON BIPOLAR NPN POWER TRANSISTOR 15 W, in the 130 – 230 MHz Range

The silicon bipolar n-p-n transistor is designed primarily for VHF mobile and marine transmitters .

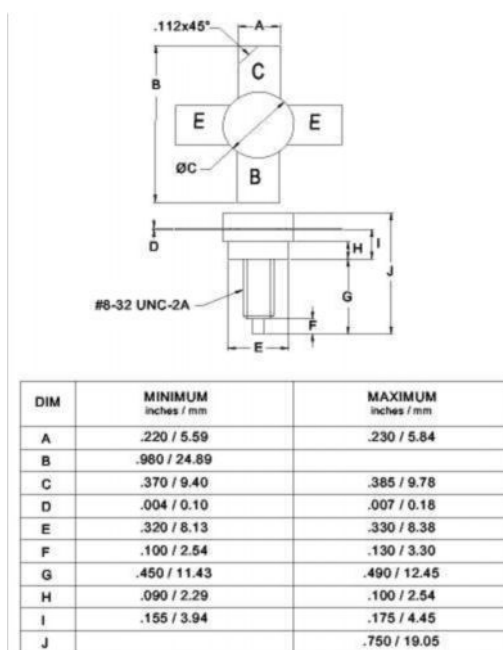
Features (At 175 MHz):

- Output Power: 15 W
- Power Gain: 6.3 dB Min
- Efficiency: 60% Min
- Common Emitter

### Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Collector–Emitter Voltage	$V_{CEO}$	18	$V_{DC}$
Collector–Base Voltage	$V_{CBO}$	36	$V_{DC}$
Emitter–Base Voltage	$V_{EBO}$	4	$V_{DC}$
Collector Current	$I_{C(max)}$	2.5	$A_{DC}$
Operation Junction Temperature	$T_J$	-65 ÷ +200	°C
Storage Temperature Range	$T_{STG}$	-65 ÷ +150	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	5.6	°C/W
Total Power Dissipation, $T_C=25^\circ C$	$P_D$	31	W

### PACKAGE STYLE .380 4L STUD



### Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage ( $I_C = 100 \text{ mA}$ , $I_B = 0 \text{ A}$ )	$V_{(BR)CEO}$	18	—	—	$V_{DC}$
Collector–Emitter Breakdown Voltage ( $I_C = 20 \text{ mA}$ , $V_{BE} = 0 \text{ V}$ )	$V_{(BR)CER}$	36	—	—	$V_{DC}$
Emitter–Base Breakdown Voltage ( $I_E = 10 \text{ mA}$ , $I_C = 0 \text{ A}$ )	$V_{(BR)EBO}$	4	—	—	$V_{DC}$
Collector–Base Leakage Current ( $V_{CB} = 15 \text{ V}$ , $I_E = 0 \text{ A}$ )	$I_{CBO}$	—	—	0.5	$mA_{DC}$
DC Current Gain ( $V_{CE} = 5 \text{ V}$ , $I_C = 0.25 \text{ A}$ )	$h_{FE}$	5	—	100	
Output Capacitance ( $V_{CB} = 15 \text{ V}$ , $I_C = 0 \text{ A}$ , $f = 1 \text{ MHz}$ )	$C_{OB}$	—	—	85	pF
Power Gain ( $V_{CB} = 12.5 \text{ V}$ , $P_{OUT} = 15 \text{ W}$ , $f = 175 \text{ MHz}$ )	$G_p$	6.3	—	—	dB
Drain Efficiency ( $V_{CB} = 12.5 \text{ V}$ , $P_{OUT} = 15 \text{ W}$ , $f = 175 \text{ MHz}$ )	$\eta_c$	60	—	—	%

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