

2N5016

**SILICON BIPOLAR NPN
POWER TRANSISTOR
15 W, up to 400 MHz**

The silicon bipolar n-p-n transistor is designed for UHF communications transmitters.

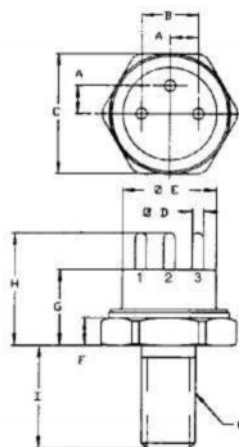
Features (At 400 MHz):

- Output Power: 15 W
- Power Gain: 4.8 dB Min
- Efficiency: 50% Min

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Collector–Emitter Voltage	V_{CEO}	30	V_{DC}
Collector-Base Voltage	V_{CBO}	65	V_{DC}
Emitter–Base Voltage	V_{EBO}	4	V_{DC}
Collector Current	I_C	4.5	A_{DC}
Operation Junction Temperature	T_J	-65 ÷ +200	°C
Storage Temperature Range	T_{STG}	-65 ÷ +150	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	7.5	°C/W
Total Power Dissipation, $T_C=25^\circ C$	P_D	30	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 ($I_C = 100\text{ mA}$, $I_B = 0\text{ A}$)	$V_{(BR)CEO}$	30	—	—	V_{DC}
Collector–Emitter Breakdown Voltage ($I_C = 10\text{ mA}$, $V_{BE} = 0\text{ V}$)	$V_{(BR)CER}$	65	—	—	V_{DC}
Emitter–Base Breakdown Voltage ($I_E = 1\text{ mA}$, $I_C = 0\text{ A}$)	$V_{(BR)EBO}$	4	—	—	V_{DC}
Collector– Base Leakage Current ($V_{CB} = 30\text{ V}$, $I_E = 0\text{ A}$)	I_{CBO}	—	—	0.10	mA_{DC}
DC Current Gain ($V_{CE} = 5\text{ V}$, $I_C = 200\text{ mA}$)	h_{FE}	10	—	100	
Output Capacitance ($V_{CB} = 28\text{ V}$, $I_C = 0\text{ A}$, $f = 1\text{ MHz}$)	C_{OB}	—	—	25	pF
Power Gain ($V_{CE} = 28\text{ V}$, $f = 400\text{ MHz}$, $P_{OUT} = 15\text{ W}$)	Gp	4.8	—	—	dB
Drain Efficiency ($V_{CE} = 28\text{ V}$, $f = 400\text{ MHz}$, $P_{OUT} = 15\text{ W}$)	η	50	—	—	%

ZAO ‘Syntez Microelectronics’

119V Leninsky Prospekt, Voronezh 394007, Russia • Tel +7-4732-379-101 Fax +7-4732-266-057

exim@syntezmicro.ru

www.syntezmicro.ru

Specification is subject to change without notice