

## KT9147AC

### SILICON BIPOLAR NPN POWER TRANSISTOR 200 W, in the 30 – 500 MHz Frequency Range

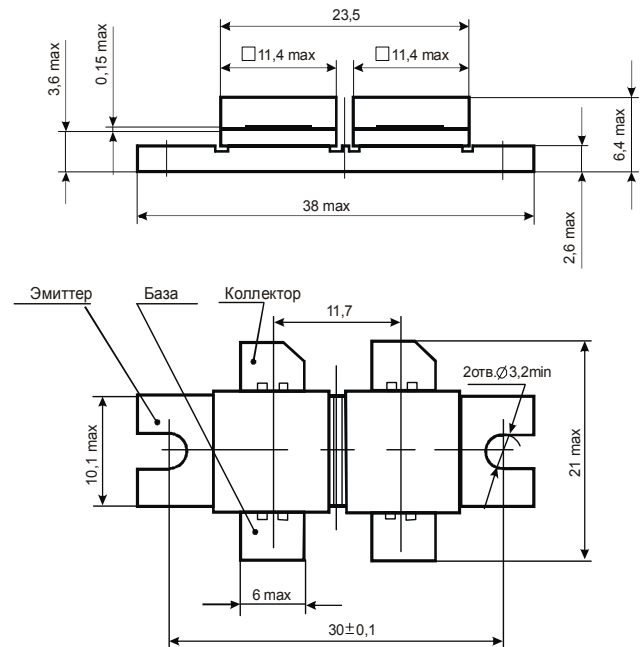
The silicon bipolar n-p-n transistor is designed for wideband large-signal output and driver amplifier stages in the 30 to 500 MHz frequency range.

Features (At 400 MHz):

- Output Power: 160 W
- Power Gain: 6 dB Min
- Efficiency: 50% Min

#### Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Collector-Base Voltage	$V_{CB0}$	50	$V_{DC}$
Emitter-Base Voltage	$V_{EB0}$	4	$V_{DC}$
Collector Current	$I_C$	29	$A_{DC}$
Operation Junction Temperature	$T_j$	$-65 \div +200$	$^{\circ}C$
Storage Temperature Range	$T_{STG}$	$-65 \div +150$	$^{\circ}C$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.6	$^{\circ}C/W$
Total Power Dissipation, $T_C=25^{\circ}C$	$P_D$	292	W



CaseKT-82

#### Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage ( $I_C = 50 \text{ mA}$ , $V_{BE} = 0 \text{ V}$ )	$V_{(BR)CER}$	50	—	—	$V_{DC}$
Emitter-Base Breakdown Voltage ( $I_E = 5 \text{ mA}$ , $I_C = 0 \text{ A}$ )	$V_{(BR)EBO}$	4	—	—	$V_{DC}$
Collector-Base Leakage Current ( $V_{CB} = 30 \text{ V}$ , $I_E = 0 \text{ A}$ )	$I_{CBO}$	—	—	20	$\text{mA}_{DC}$
DC Current Gain ( $V_{CE} = 5 \text{ V}$ , $I_C = 1 \text{ A}$ )	$h_{FE}$	20	—	100	
Output Capacitance ( $V_{CB} = 28 \text{ V}$ , $I_E = 0 \text{ A}$ , $f = 1 \text{ MHz}$ )	$C_{OB}$	—	—	420	pF
Power Gain ( $V_{CC} = 28 \text{ V}$ , $f = 400 \text{ MHz}$ , $P_{OUT} = 160 \text{ W}$ )	Gp	6	9	—	dB
Drain Efficiency ( $V_{CC} = 28 \text{ V}$ , $f = 400 \text{ MHz}$ , $P_{OUT} = 160 \text{ W}$ )	$\eta$	50	—	—	%

#### ZAO 'SynteZ Microelectronics'

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

[exim@syntezmicro.ru](mailto:exim@syntezmicro.ru)

[www.syntezmicro.ru](http://www.syntezmicro.ru)

Specification is subject to change without notice