

SILICON BIPOLAR NPN POWER TRANSISTOR 5 W, in the 140 – 512 MHz Frequency Range

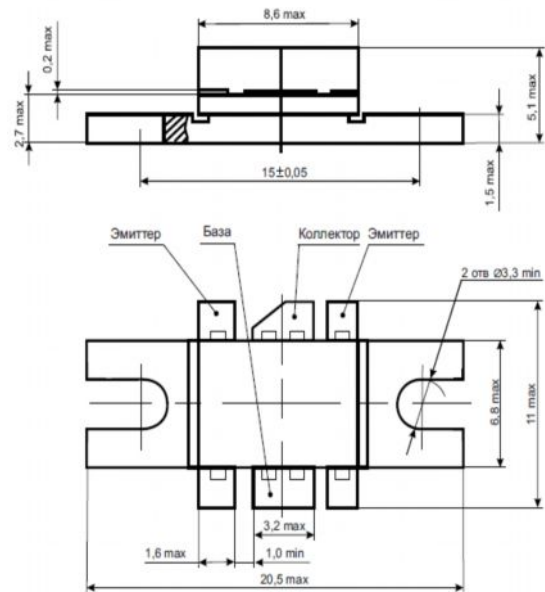
The silicon bipolar n-p-n transistor is designed for wideband large-signal output and driver amplifier stages in the 140 to 512 MHz frequency range.

Features (At 470 MHz):

- Output Power: 5 W
- Power Gain: 6 dB Min
- Efficiency: 55% Min

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Collector-Base Voltage	V_{CBO}	20	V_{DC}
Emitter-Base Voltage	V_{EBO}	3	V_{DC}
Collector Current	I_C	2.0	A_{DC}
Operation Junction Temperature	T_j	-65 ÷ +200	°C
Storage Temperature Range	T_{STG}	-65 ÷ +150	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	3	°C/W
Total Power Dissipation, $T_C=25$ °C	P_D	58	W



Case KT-83

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage ($I_C = 50$ mA, $V_{BE} = 0$ V)	$V_{(BR)CES}$	20	—	—	V_{DC}
Emitter-Base Breakdown Voltage ($I_E = 5$ mA, $I_C = 0$ A)	$V_{(BR)EBO}$	3	—	—	V_{DC}
Collector-Base Leakage Current ($V_{CB} = 20$ V, $I_E = 0$ A)	I_{CBO}	—	—	10	mA_{DC}
DC Current Gain ($V_{CE} = 10$ V, $I_C = 0.1$ A)	h_{FE}	20	—	100	
Output Capacitance ($V_{CB} = 7.5$ V, $I_E = 0$ A, $f = 1$ MHz)	C_{OB}	—	—	34	pF
Power Gain ($V_{CC} = 7.5$ V, $f = 470$ MHz, $P_{OUT} = 5$ W)	Gp	6	—	—	dB
Drain Efficiency ($V_{CC} = 7.5$ V, $f = 470$ MHz, $P_{OUT} = 5$ W)	η	55	—	—	%

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Specification is subject to change without notice