Syntez Microelectronics

KP821A

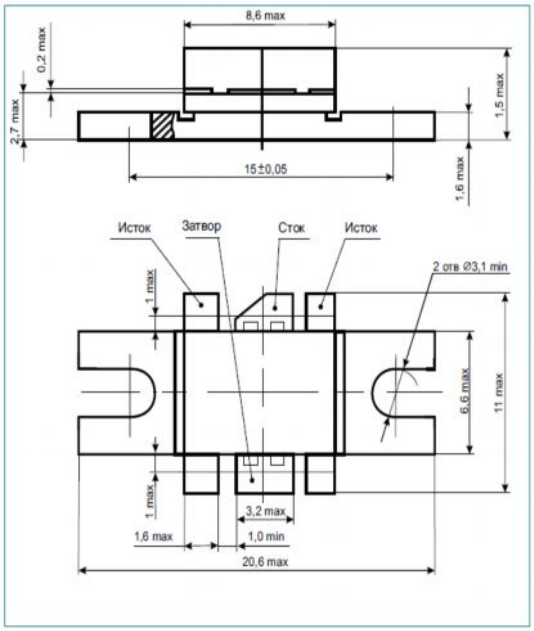
SILICON MOS N-CHANNEL POWER TRANSISTOR

5 W, up to 175 MHz, Enhancement Mode

The silicon MOS transistor is designed for professional transmitter applications in the HF/VHF frequency range.

Features:

- Power Gain: 19 dB Min
- Output Power: 5 W
- Efficiency: 50 % Min



Case KT-83

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	V_{DSS}	65	V_{DC}
Drain Current-Continuous	I_D	1.5	A_{DC}
Gate-Source Voltage	V_{GS}	±20	V_{DC}
Operation Junction Temperature	T_j	-65 ÷ +200	ºC
Storage Temperature Range	T_{STG}	-65 ÷ +150	ºC
Thermal Resistance, Junction to Case	$R_{\theta JC}$	7	ºC/W
Total Power Dissipation	P_D	25	W

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage (I_{DS}=10 mA, V_{GS}=0 V)	$V_{(BR)DSS}$	65	—	—	V_{DC}
Gate-Source Leakage Current (V_{GS}=20 V, V_{DS}=0 V)	I_{GSS}	—	—	1	μA_{DC}
Zero Gate Voltage Drain Leakage Current (V_{DS} = 28 V, V_{GS}=0 V)	I_{DSS}	—	—	2	mA_{DC}
Gate Threshold Voltage (V_{DS} = 10 V, I_D = 50mA)	$V_{GS(TH)}$	2	—	5	V_{DC}
Forward Transconductance (V_{DS} = 10 V, I_D = 0.3 A)	G_{FS}	0.16	0.26	—	mhos
Input Capacitance (V_{DS} = 28 V, V_{GS}=0 V, f = 1 MHz)	C_{ISS}	—	16	—	pF
Output Capacitance (V_{DS} = 28 V, V_{GS}=0 V, f = 1 MHz)	C_{OSS}	—	14	—	pF
Reverse Transfer Capacitance (V_{DS} = 28 V, V_{GS}=0 V, f = 1 MHz)	C_{RSS}	—	1.8	—	pF
Power Gain (V_{DS} = 28 V, P_{OUT} = 5 W, $I_{DQ.}$ = 50 mA, f = 175 MHz)	Gp	19	20	—	dB
Drain Efficiency (V_{DS} = 28 V, P_{OUT} = 5 W, $I_{DQ.}$ = 50 mA, f = 175 MHz)	η_D	50	60	—	%

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