

SILICON MOS N-CHANNEL POWER TRANSISTOR 30 W, up to 175 MHz, Enhancement Mode

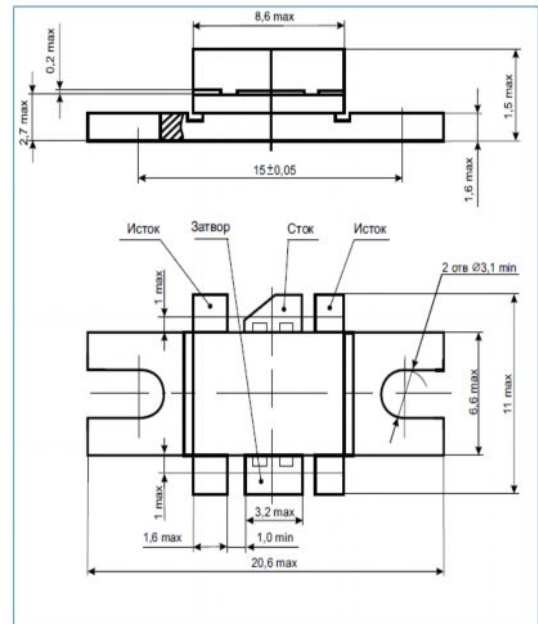
The silicon MOS transistor is designed for professional transmitter applications in the HF/VHF frequency range.

Features:

- Power Gain: 16 dB Min
- Output Power: 30 W
- Efficiency: 50 % Min

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	V_{DSS}	65	V_{DC}
Drain Current-Continuous	I_D	6	A_{DC}
Gate-Source Voltage	V_{GS}	± 20	V_{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	$R_{\theta JC}$	2.6	$^{\circ}C/W$
Total Power Dissipation	P_D	67	W



Case KT-83

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage ($I_{DS}=20 \text{ mA}$, $V_{GS}=0 \text{ V}$)	$V_{(BR)DSS}$	65	—	—	V_{DC}
Gate-Source Leakage Current ($V_{GS}=20 \text{ V}$, $V_{DS}=0 \text{ V}$)	I_{GSS}	—	—	1	μA_{DC}
Zero Gate Voltage Drain Leakage Current ($V_{DS} = 28 \text{ V}$, $V_{GS}=0 \text{ V}$)	I_{DSS}	—	—	6	mA_{DC}
Gate Threshold Voltage ($V_{DS} = 10 \text{ V}$, $I_D = 50 \text{ mA}$)	$V_{GS(TH)}$	2	—	5	V_{DC}
Forward Transconductance ($V_{DS} = 10 \text{ V}$, $I_D = 1.5 \text{ A}$)	G_{FS}	1.2	1.7	—	mhos
Input Capacitance ($V_{DS} = 28 \text{ V}$, $V_{GS}=0 \text{ V}$, $f = 1 \text{ MHz}$)	C_{ISS}	—	83	—	pF
Output Capacitance ($V_{DS} = 28 \text{ V}$, $V_{GS}=0 \text{ V}$, $f = 1 \text{ MHz}$)	C_{OSS}	—	62	—	pF
Reverse Transfer Capacitance ($V_{DS} = 28 \text{ V}$, $V_{GS}=0 \text{ V}$, $f = 1 \text{ MHz}$)	C_{RSS}	—	8	—	pF
Power Gain ($V_{DS} = 28 \text{ V}$, $P_{OUT} = 30 \text{ W}$, $I_{DQ} = 50 \text{ mA}$, $f = 175 \text{ MHz}$)	G_p	16	18	—	dB
Drain Efficiency ($V_{DS} = 28 \text{ V}$, $P_{OUT} = 30 \text{ W}$, $I_{DQ} = 50 \text{ mA}$, $f = 175 \text{ MHz}$)	η_D	50	60	—	%

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Specification is subject to change without notice