

SILICON MOS N-CHANNEL RF POWER TRANSISTOR 10 W, up to 500 MHz, Enhancement Mode

KP978BC

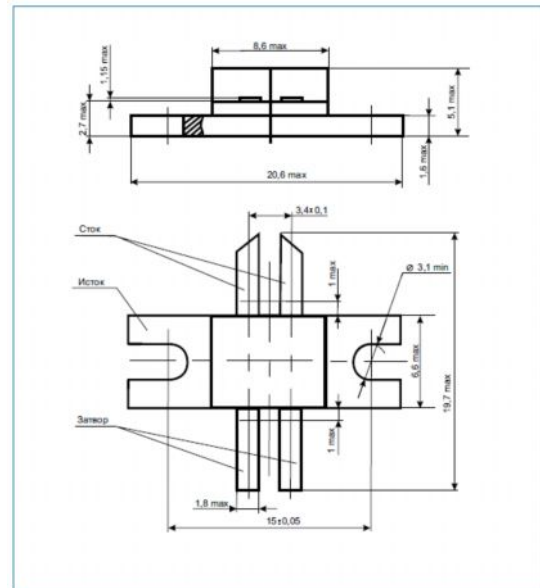
Designed primarily for wideband large-signal output and driver from 30–500 MHz.

Features:

- Performance at 500 MHz, 28 V_{dc}
- Power Gain: 13 dB Min
- Output Power: 10 W
- Efficiency: 50 % Min

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	V _{DSS}	65	V _{DC}
Drain Current-Continuous	I _D	3.0	A _{DC}
Gate-Source Voltage	V _{GS}	±20	V _{DC}
Storage Temperature Range	T _{STG}	-65 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	3.2	°C/W
Total Power Dissipation @T _C =25 °C	P _D	73	W



Case KT-81

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage (I _D =5.0 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}	—	—	1.0	μA _{DC}
Zero Gate Voltage Drain Leakage Current (V _{DS} = 28 V, V _{GS} =0 V)	I _{DSS}	—	—	2.0	mA _{DC}
Gate Threshold Voltage (V _{DS} = 10 V, I _D = 20 mA) (1)	V _{GS(TH)}	1	—	5	V _{DC}
Forward Transconductance (V _{DS} = 10 V, I _D = 0.7 A) (1)	G _{FS}	0.19	0.3	—	mhos
Input Capacitance (V _{DS} = 28 V, V _{GS} =0 V, f = 1 MHz) (1)	C _{ISS}	—	16	—	pF
Output Capacitance (V _{DS} = 28 V, V _{GS} =0 V, f = 1 MHz) (1)	C _{OSS}	—	14	—	pF
Reverse Transfer Capacitance (V _{DS} = 28 V, V _{GS} =0 V, f = 1 MHz) (1)	C _{RSS}	—	1.5	—	pF
Power Gain (V _{DS} = 28 V, P _{OUT} = 10 W, I _{DQ} = 50 mA, f = 500 MHz)	G _p	13	15	—	dB
Drain Efficiency (V _{DS} = 28 V, P _{OUT} = 10 W, I _{DQ} = 50 mA, f = 500 MHz)	η _D	50	55	—	%

(1) Each transistor chip measured separately.

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Specification is subject to change without notice