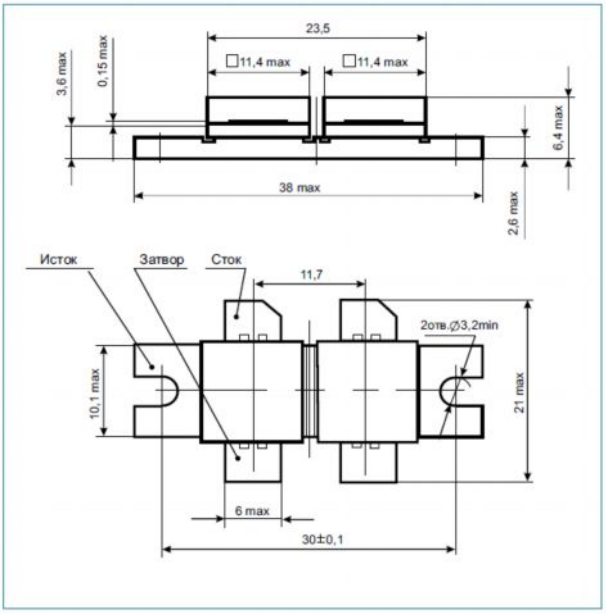
Syntez Microelectronics

KP979VC

SILICON MOS N-CHANNEL POWER TRANSISTOR
300 W, up to 230 MHz, Enhancement Mode

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

Features:
- Performance at 230 MHz, 50 Vdc
- Power Gain: 14 dB Min
- Output Power: 300 W
- Efficiency: 50 % Min



Case KT-82

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	V_{DSS}	120	V_{DC}
Drain Current-Continuous	I_D	40	A_{DC}
Gate-Source Voltage	V_{GS}	±40	V_{DC}
Operation Junction Temperature	T_j	-65 ÷ +200	ºC
Storage Temperature Range	T_{STG}	-65 ÷ +150	ºC
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.38	ºC/W
Total Power Dissipation	P_D	460	W

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage (I_{DS}=50 mA, V_{GS}=0 V)	$V_{(BR)DSS}$	120	—	—	V_{DC}
Gate-Source Leakage Current (V_{GS}=40 V, V_{DS}=0 V)	I_{GSS}	—	—	1	μA_{DC}
Zero Gate Voltage Drain Leakage Current (V_{DS} = 50 V, V_{GS}=0 V)	I_{DSS}	—	—	20	mA_{DC}
Gate Threshold Voltage (V_{DS} = 10 V, I_D = 100mA)	$V_{GS(TH)}$	2	—	5	V_{DC}
Forward Transconductance (V_{DS} = 10 V, I_D = 5 A) (1)	G_{FS}	4	5	—	mhos
Input Capacitance (V_{DS} = 50 V, V_{GS}=0 V, f = 1 MHz) (1)	C_{ISS}	—	350	—	pF
Output Capacitance (V_{DS} = 50 V, V_{GS}=0 V, f = 1 MHz) (1)	C_{OSS}	—	180	—	pF
Reverse Transfer Capacitance (V_{DS} = 50 V, V_{GS}=0 V, f = 1 MHz) (1)	C_{RSS}	—	18	—	pF
Power Gain (V_{DS} = 50 V, P_{OUT} = 300 W, $I_{DQ.}$ = 100 mA, f = 230 MHz)	Gp	14	15	—	dB
Drain Efficiency (V_{DS} = 50 V, P_{OUT} = 300 W, $I_{DQ.}$ = 100 mA, f = 230 MHz)	η_D	50	60	—	%

(1) Each transistor chip measured separately.

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