

SILICON LDMOS MICROWAVE POWER TRANSISTOR 80 W, up to 500 MHz, Enhancement Mode

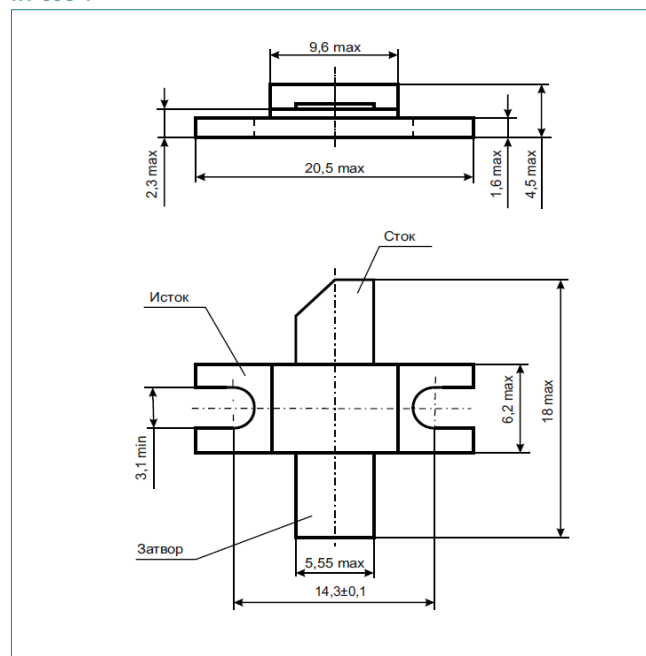
Designed for broadband commercial and industrial applications with frequencies from to 500 MHz.

Features:

- Power Gain: 17 dB Min
- Output Power: 80 W
- Efficiency: 65 % Min

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	V_{DSS}	65	V_{DC}
Drain Current-Continuous	I_D	7	A_{DC}
Gate-Source Voltage	V_{GS}	-0.5, +20	V_{DC}
Operation Junction Temperature	T_j	-65 ÷ +200	$^{\circ}C$
Storage Temperature Range	T_{STG}	-65 ÷ +150	$^{\circ}C$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.0	$^{\circ}C/W$
Total Power Dissipation	P_D	175	W

KT-55C-1


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}	—	—	2	μA_{DC}
Zero Gate Voltage Drain Leakage Current ($V_{DS} = 28\text{ V}$, $V_{GS}=0\text{ V}$)	I_{DSS}	—	—	1	mA_{DC}
Gate Threshold Voltage ($V_{DS} = 10\text{ V}$, $I_D = 100\text{ mA}$)	$V_{GS(TH)}$	2	—	5	V_{DC}
Forward Transconductance ($V_{DS} = 10\text{ V}$, $I_D = 1.5\text{ A}$)	G_{FS}	—	3.0	—	mhos
Drain-Source on-state resistance ($V_{GS} = 10\text{ V}$, $I_D = 1.0\text{ A}$)	R_{DSon}	—	0.18	—	Ω
Dynamic Characteristics					
Input Capacitance ($V_{DS} = 28\text{ V}$, $V_{GS}=0\text{ V}$, $f = 1\text{ MHz}$)	C_{ISS}	—	75	—	pF
Output Capacitance ($V_{DS} = 28\text{ V}$, $V_{GS}=0\text{ V}$, $f = 1\text{ MHz}$)	C_{OSS}	—	50	—	pF
Reverse Transfer Capacitance ($V_{DS} = 28\text{ V}$, $V_{GS}=0\text{ V}$, $f = 1\text{ MHz}$)	C_{RSS}	—	1.7	—	pF
Functional Characteristics					
Power Gain ($V_{DS} = 28\text{ V}$, $P_{OUT} = 80\text{ W}$, $I_{DQ} = 100\text{ mA}$, $f = 500\text{ MHz}$)	G_p	17	19	—	dB
Drain Efficiency ($V_{DS} = 28\text{ V}$, $P_{OUT} = 80\text{ W}$, $I_{DQ} = 100\text{ mA}$, $f = 500\text{ MHz}$)	η_D	65	70	—	%

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