

## SILICON LDMOS MICROWAVE POWER TRANSISTOR 150 W, up to 500 MHz, Enhancement Mode

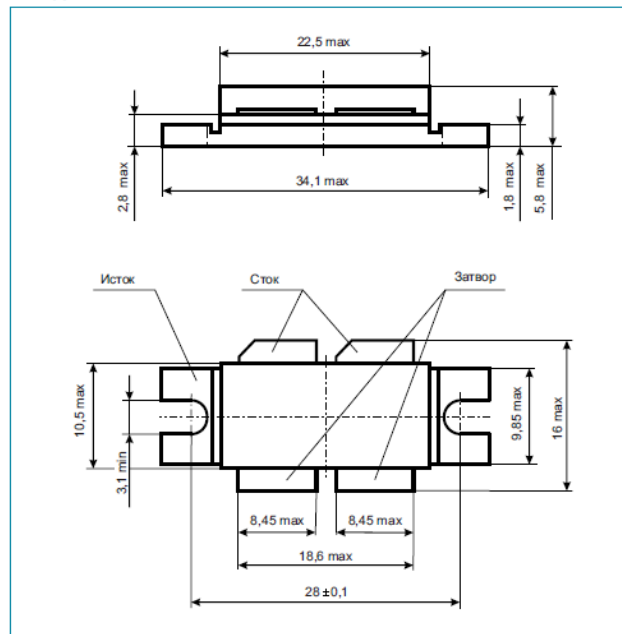
Designed for broadband commercial and industrial applications with frequencies from to 500 MHz.

### Features:

- Power Gain: 16 dB Min
- Output Power: 150 W
- Efficiency: 65 % Min

### Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	$V_{DSS}$	65	$V_{DC}$
Drain Current-Continuous	$I_D$	14	$A_{DC}$
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	$R_{\theta JC}$	0.7	$^{\circ}C/W$
Total Power Dissipation	$P_D$	250	W

**KT-103A-1**


### Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage ( $I_{DS}=20$ mA, $V_{GS}=0$ V)	$V_{(BR)DSS}$	65	—	—	$V_{DC}$
Gate-Source Leakage Current ( $V_{GS}=20$ V, $V_{DS}=0$ V) <sup>(1)</sup>	$I_{GSS}$	—	—	2	$\mu A_{DC}$
Zero Gate Voltage Drain Leakage Current ( $V_{DS} = 28$ V, $V_{GS}=0$ V) <sup>(1)</sup>	$I_{DSS}$	—	—	1	$mA_{DC}$
Gate Threshold Voltage ( $V_{DS} = 10$ V, $I_D = 100$ mA)	$V_{GS(TH)}$	2	—	5	$V_{DC}$
Forward Transconductance ( $V_{DS} = 10$ V, $I_D = 1.5$ A) <sup>(1)</sup>	$G_{FS}$	—	3.0	—	mhos
Drain-Source on-state resistance ( $V_{GS} = 10$ V, $I_D = 1.0$ A) <sup>(1)</sup>	$R_{DSon}$	—	0.2	—	$\Omega$
<b>Dynamic Characteristics</b>					
Input Capacitance ( $V_{DS} = 28$ V, $V_{GS}=0$ V, $f = 1$ MHz) <sup>(1)</sup>	$C_{ISS}$	—	75	—	pF
Output Capacitance ( $V_{DS} = 28$ V, $V_{GS}=0$ V, $f = 1$ MHz) <sup>(1)</sup>	$C_{OSS}$	—	50	—	pF
Reverse Transfer Capacitance ( $V_{DS} = 28$ V, $V_{GS}=0$ V, $f = 1$ MHz) <sup>(1)</sup>	$C_{RSS}$	—	1.7	—	pF
<b>Functional Characteristics</b>					
Power Gain ( $V_{DS} = 28$ V, $P_{OUT} = 80$ W, $I_{DQ} = 100$ mA, $f = 500$ MHz)	$G_p$	16	17	—	dB
Drain Efficiency ( $V_{DS} = 28$ V, $P_{OUT} = 80$ W, $I_{DQ} = 100$ mA, $f = 500$ MHz)	$\eta_D$	65	68	—	%

1. Each side of device measured separately.

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Specification are subject to change without notice