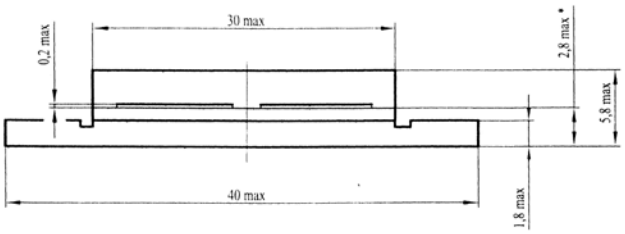
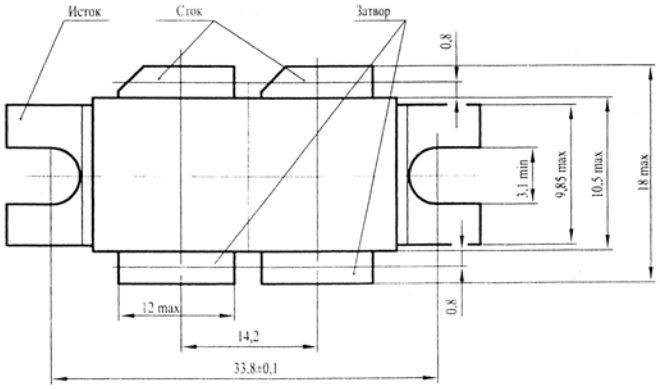
SILICON LDMOS MICROWAVE POWER TRANSISTOR
250 W, up to 500 MHz

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





Features:

- Power Gain: 17 dB Min
- Output Power: 250 W
- Efficiency: 65 % Min

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	V_{DSS}	65	V_{DC}
Drain Current-Continuous	I_D	28	A_{DC}
Gate-Source Voltage	V_{GS}	-0.5, +20	V_{DC}
Operation Junction Temperature	T_j	-65 ÷ +200	ºC
Storage Temperature Range	T_{STG}	-65 ÷ +150	ºC
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.45	ºC /W
Total Power Dissipation	P_D	388	W

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) (1)	I_{GSS}	—	—	2	μA_{DC}
Zero Gate Voltage Drain Leakage Current (V_{DS} = 28 V, V_{GS}=0 V) (1)	I_{DSS}	—	—	2	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) (1)	G_{FS}		6.0	—	mhos
Drain–Source on-state resistance (V_{GS} = 10 V, I_D = 3.0 A) (1)	R_{DSon}	—	0.11	—	Ω
Dynamic Characteristics					
Input Capacitance (V_{DS} = 28 V, V_{GS}=0 V, f = 1 MHz) (1)	C_{ISS}	—	150	—	pF
Output Capacitance (V_{DS} = 28 V, V_{GS}=0 V, f = 1 MHz) (1)	C_{OSS}	—	100	—	pF
Reverse Transfer Capacitance (V_{DS} = 28 V, V_{GS}=0 V, f = 1 MHz) (1)	C_{RSS}	—	3.5	—	pF
Functional Characteristics					
Power Gain (V_{DS} = 28 V, P_{OUT} = 80 W, I_{DQ} = 100 mA, f = 500 MHz)	Gp	17	18	—	dB
Drain Efficiency (V_{DS} = 28 V, P_{OUT} = 80 W, I_{DQ} = 100 mA, f = 500 MHz)	η_D	65	68	—	%

1. Each side of device measured separately.

JSC 'Syntez Microelectronics'
119V Leninsky Prospekt, Voronezh 394007, Russia • Tel +7-473-237-9101 Fax +7-473-226-6057

exim@syntezmicro.ru www.syntezmicro.ru