

# BLF245

## SILICON MOS N-CHANNEL POWER TRANSISTOR 30 W, up to 175 MHz, Enhancement Mode

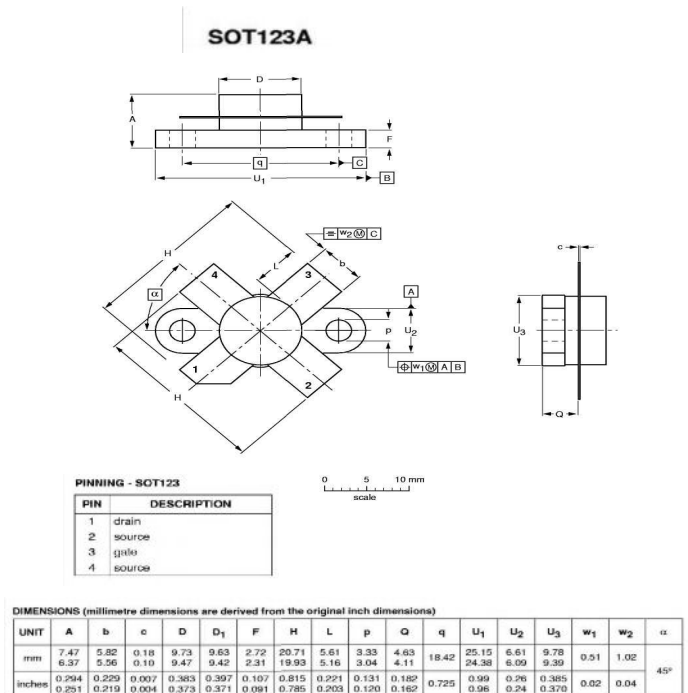
The silicon MOS transistor designed for large signal amplifier applications in the VHF frequency range.

### Features:

- Power Gain: 13 dB Min
- Output Power: 30 W
- Efficiency: 50 % Min

### Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	$V_{DS}$	65	$V_{DC}$
Drain Current-Continuous	$I_D$	6	$A_{DC}$
Gate-Source Voltage	$V_{GS}$	$\pm 20$	$V_{DC}$
Operation Junction Temperature	$T_j$	$-65 \div +200$	$^{\circ}C$
Storage Temperature Range	$T_{STG}$	$-65 \div +150$	$^{\circ}C$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.6	$^{\circ}C/W$
Total Power Dissipation	$P_D$	68	W



### Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage ( $I_{DS}=10\text{ mA}$ , $V_{GS}=0\text{ V}$ )	$V_{(BR)DS}$	65	—	—	$V_{DC}$
Gate-Source Leakage Current ( $V_{GS}=20\text{ V}$ , $V_{DS}=0\text{ V}$ )	$I_{GSS}$	—	—	1	$\mu A_{DC}$
Zero Gate Voltage Drain Leakage Current ( $V_{DS} = 28\text{ V}$ , $V_{GS}=0\text{ V}$ )	$I_{DSS}$	—	—	2	$mA_{DC}$
Gate Threshold Voltage ( $V_{DS} = 10\text{ V}$ , $I_D = 10\text{ mA}$ )	$V_{GS(TH)}$	2	—	4.5	$V_{DC}$
Forward Transconductance ( $V_{DS} = 10\text{ V}$ , $I_D = 1.5\text{ A}$ )	$G_{FS}$	1.2	1.9	—	mhos
Input Capacitance ( $V_{DS} = 28\text{ V}$ , $V_{GS}=0\text{ V}$ , $f = 1\text{ MHz}$ )	$C_{ISS}$	—	125	—	pF
Output Capacitance ( $V_{DS} = 28\text{ V}$ , $V_{GS}=0\text{ V}$ , $f = 1\text{ MHz}$ )	$C_{OSS}$	—	75	—	pF
Reverse Transfer Capacitance ( $V_{DS} = 28\text{ V}$ , $V_{GS}=0\text{ V}$ , $f = 1\text{ MHz}$ )	$C_{RSS}$	—	7	—	pF
Power Gain ( $V_{DS} = 28\text{ V}$ , $P_{OUT} = 30\text{ W}$ , $I_{DQ} = 50\text{ mA}$ , $f = 175\text{ MHz}$ )	$G_p$	13	15.5	—	dB
Drain Efficiency ( $V_{DS} = 28\text{ V}$ , $P_{OUT} = 30\text{ W}$ , $I_{DQ} = 50\text{ mA}$ , $f = 175\text{ MHz}$ )	$\eta_D$	50	67	—	%

### ZAO 'Syntez Microelectronics'

119V Leninsky Prospekt, Voronezh 394007, Russia • Tel +7-4732-379-101 Fax +7-4732-266-057

[exim@syntezmicro.ru](mailto:exim@syntezmicro.ru)

[www.syntezmicro.ru](http://www.syntezmicro.ru)

Specification is subject to change without notice