

# BLF248

## SILICON MOS N-CHANNEL POWER TRANSISTOR 300 W, up to 225 MHz, Enhancement Mode

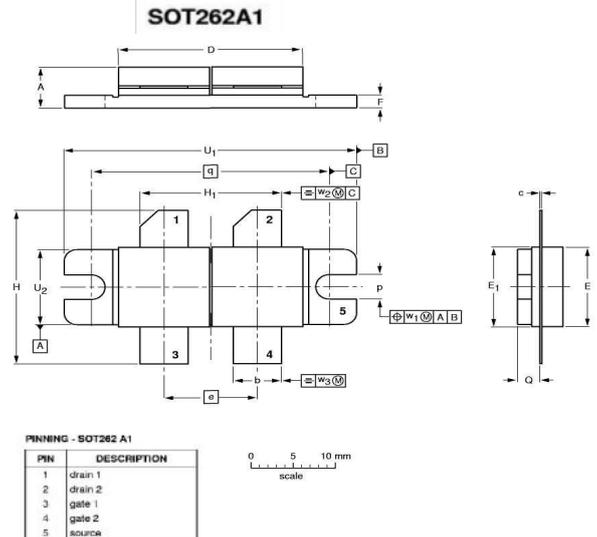
The silicon MOS push pull transistor designed for large signal amplifier applications in the VHF frequency range.

### Features:

- Power Gain: 10 dB Min
- Output Power: 300 W
- Efficiency: 55 % Min

### Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	$V_{DS}$	65	$V_{DC}$
Drain Current-Continuous	$I_D$	25	$A_{DC}$
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	$R_{\theta JC}$	0.35	$^{\circ}C/W$
Total Power Dissipation	$P_D$	500	W



DIMENSIONS (millimetre dimensions are derived from the original inch dimensions)

UNIT	A	b	c	D	e	E	$E_1$	F	H	$H_1$	p	Q	q	$U_1$	$U_2$	$w_1$	$w_2$	$w_3$	
mm	5.77	5.85	0.16	21.98	11.05	10.27	10.29	1.78	20.58	17.02	3.28	2.85	2.59	27.94	34.17	9.91	0.51	1.02	0.25
inch	0.227	0.230	0.006	0.865	0.435	0.404	0.408	0.070	0.81	0.67	0.129	0.112	0.102	1.100	1.345	0.390	0.02	0.04	0.01

### Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage ( $I_{DS}=100$ mA, $V_{GS}=0$ V)	$V_{(BR)DSS}$	65	—	—	$V_{DC}$
Gate-Source Leakage Current ( $V_{GS}=20$ V, $V_{DS}=0$ V)	$I_{GSS}$	—	—	1	$\mu A_{DC}$
Zero Gate Voltage Drain Leakage Current ( $V_{DS} = 28$ V, $V_{GS}=0$ V)	$I_{DSS}$	—	—	5	$mA_{DC}$
Gate Threshold Voltage ( $V_{DS} = 10$ V, $I_D = 100$ mA)	$V_{GS(TH)}$	2	—	4.5	$V_{DC}$
Forward Transconductance ( $V_{DS} = 10$ V, $I_D = 8$ A)	$G_{FS}$	5	7.5	—	mhos
Input Capacitance ( $V_{DS} = 28$ V, $V_{GS}=0$ V, $f = 1$ MHz)	$C_{ISS}$	—	500	—	pF
Output Capacitance ( $V_{DS} = 28$ V, $V_{GS}=0$ V, $f = 1$ MHz)	$C_{OSS}$	—	360	—	pF
Reverse Transfer Capacitance ( $V_{DS} = 28$ V, $V_{GS}=0$ V, $f = 1$ MHz)	$C_{RSS}$	—	46	—	pF
Power Gain ( $V_{DS} = 28$ V, $P_{OUT} = 300$ W, $I_{DQ} = 2 \times 250$ mA, $f = 225$ MHz)	Gp	10	11.5	—	dB
Drain Efficiency ( $V_{DS} = 28$ V, $P_{OUT} = 300$ W, $I_{DQ} = 2 \times 250$ mA, $f = 225$ MHz)	$\eta_D$	55	65	—	%

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Specification is subject to change without notice