SYNTEZ MICROELECTRONICS

SILICON MOS N-CHANNEL POWER TRANSISTOR

300 W, up to 225 MHz, Enhancement Mode

BLF248

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

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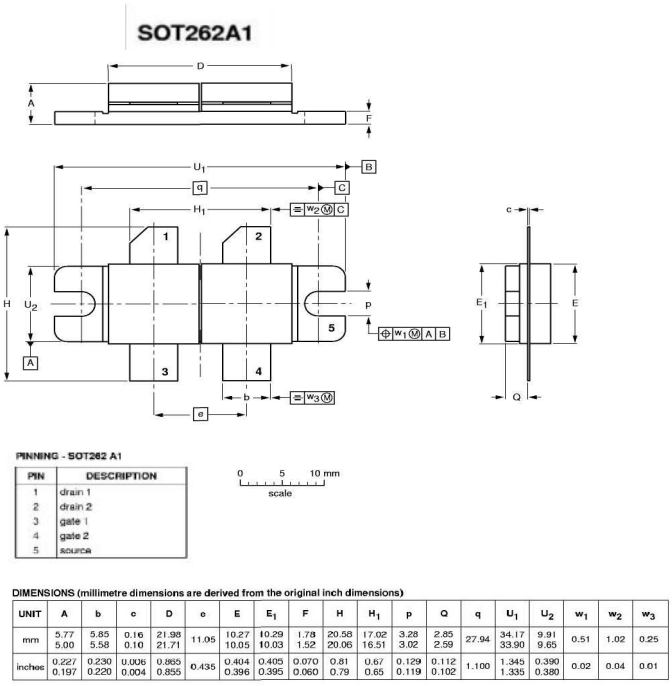
Features:

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



Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	V_{DSS}	65	V_{DC}
Drain Current-Continuous	I_D	25	A_{DC}
Gate-Source Voltage	V_{GS}	±20	V_{DC}
Operation Junction Temperature	T_j	-65 ÷ +200	ºC
Storage Temperature Range	T_{STG}	-65 ÷ +150	ºC
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.35	ºC /W
Total Power Dissipation	P_D	500	W

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	μA_{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 x 250 mA, f = 225 MHz)	Gp	10	11.5	—	dB
Drain Efficiency (V_{DS} = 28 V, P_{OUT} = 300 W, I_{DQ}= 2 x 250 mA, f = 225 MHz)	η_D	55	65	—	%

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