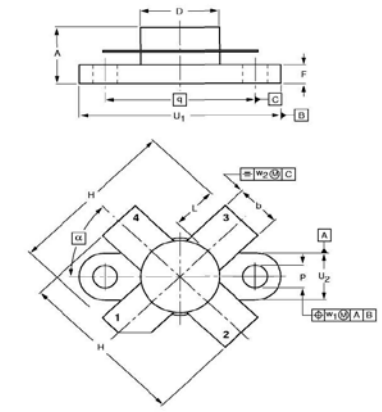
SILICON MOS N-CHANNEL MICROWAVE POWER TRANSISTOR
5 W, up to 175 MHz, Enhancement Mode

The silicon MOS transistor is designed for professional transmitter applications in the HF/VHF frequency range.

Features:

- Power Gain: 13 dB Min
- Output Power: 5 W
- Efficiency: 50 % Min

SOT123A



PINNING - SOT123

PIN	DESCRIPTION
1	drain
2	source
3	gate
4	source

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

UNIT	A	b	c	D	D_1	F	H	L	p	Q	q	U_1	U_2	U_3	w_1	w_2	α
mm	7.47 6.37	5.82 5.56	0.18 0.10	9.73 9.47	9.63 9.42	2.72 2.31	20.71 19.93	5.61 5.16	3.33 3.04	4.63 4.11	18.42	25.15 24.38	6.61 6.09	9.78 9.39	0.51	1.02	45°
inches	0.294 0.251	0.229 0.219	0.007 0.004	0.383 0.373	0.397 0.371	0.107 0.091	0.815 0.785	0.221 0.203	0.131 0.120	0.182 0.162	0.725	0.99 0.96	0.26 0.24	0.385 0.370	0.02	0.04	

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Drain-Source Voltage	V_{DSS}	65	V_{DC}
Drain Current-Continuous	I_D	1	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	$R_{\theta JC}$	11	ºC/W
Total Power Dissipation	P_D	16	W

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage (I_{DS}=0,1 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}	—	—	10	μA_{DC}
Gate Threshold Voltage (V_{DS} = 10 V, I_D = 3 mA)	$V_{GS(TH)}$	2	—	4.5	V_{DC}
Forward Transconductance (V_{DS} = 10 V, I_D = 0.3 A)	G_{FS}	0.16	0.24	—	mhos
Input Capacitance (V_{DS} = 28 V, V_{GS}=0 V, f = 1 MHz)	C_{ISS}	—	13	—	pF
Output Capacitance (V_{DS} = 28 V, V_{GS}=0 V, f = 1 MHz)	C_{OSS}	—	9.4	—	pF
Reverse Transfer Capacitance (V_{DS} = 28 V, V_{GS}=0 V, f = 1 MHz)	C_{RSS}	—	1.7	—	pF
Power Gain (V_{DS} = 28 V, P_{OUT} = 5 W, $I_{DQ.}$ = 10 mA, f = 175 MHz)	Gp	13	16	—	dB
Drain Efficiency (V_{DS} = 28 V, P_{OUT} = 5 W, $I_{DQ.}$ = 10 mA, f = 175 MHz)	η_D	50	60	—	%

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Specification are subject to change without notice