

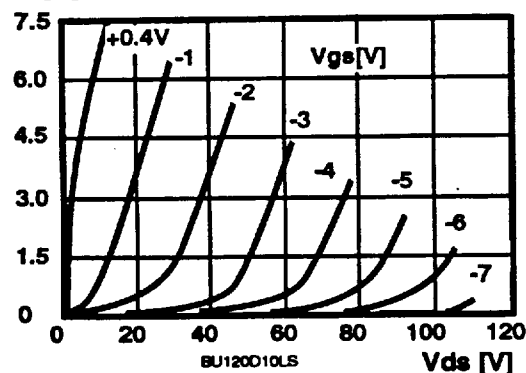


SST™ SERIES SU/S

VHF/UHF SILICON POWER FETS
10 TO 120 WATTS, 10MHz-500MHz

MICROWAVE TECHNOLOGY 4268 Solar Way Fremont, CA 94538 510-651-6700 FAX 510-651-2208

$I_{ds}[A]$



FEATURES

- N-CHANNEL JFET, DEPLETION MODE
- APPLICATION RANGE 10 MHz TO 500 MHz
- POWER OUTPUTS FROM 10 TO 120 WATTS CW
- CLASS A, B, OR C OPERATION
- HIGH POWER EFFICIENCY
- NO THERMAL RUNAWAY
- NO dV/dt LATCH-UP OR SECONDARY BREAKDOWN
- BROADBAND CAPABILITY
- COMMON SOURCE CONFIGURATION
- CHOICE OF PACKAGES

DESCRIPTION

The SST Series SU silicon power FETs are designed for power amplifier applications where power efficiency, linearity, broadband performance, and ruggedness are top priorities. The structure of the SST can be called a Solid State Triode™ since it has a non-saturating I-V curve. The higher input impedance of these devices simplifies the design of multi-device matched power modules. Drain supply voltages of 28 to 65 volts insure lower currents than in other comparable FET structures producing higher power levels and efficiencies. Finally, the device is very rugged and can withstand high VSWR levels without damage and operate over very large temperature ranges (T_j from -200 to 200°C).

ELECTRICAL SPECIFICATIONS – COMMON SOURCE CONFIGURATION*

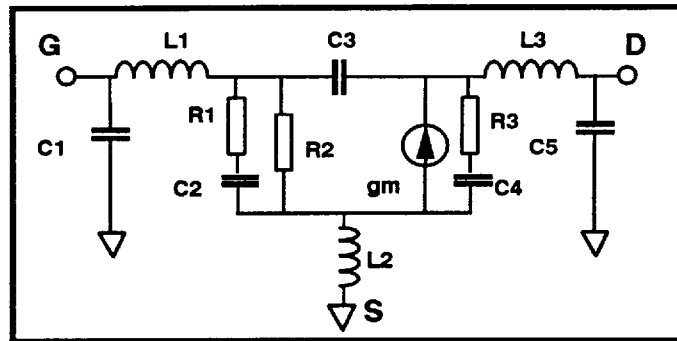
DEVICE	Output Power [W] min	D/S Blocking Volt. [V] min	Power Gain [dB] typ ¹	Power Efficiency [%] min	MAXIMUM RATINGS		PKG
					Drain Current I_{ds} [A]	Power Dissipation P_d [W]	
SU15A10LS	15	100	10	55	1.5	50	A
SU25A10LS	25	100	10	55	2.0	65	A
SU25B10LS	25	100	10	55	2.0	75	B
SU35A10LS	35	100	10	50	4.0	70	A
SU50A10LS	50	100	10	50	4.0	100	A
SU50B10LS	50	100	10	50	4.5	100	B
SU75D10LS	75	100	10	50	5.0	150	D
SU80C10LS	80	100	10	50	3.5	150	C
SU100D10LS	100	100	10	50	8.0	200	D
SU120D10LS	120	100	10	50	8.0	200	D

* Contact MwT for individual data sheets, additional specifications and test conditions.

1— $f=250$ MHz, $V_{gs}=50$ Volts

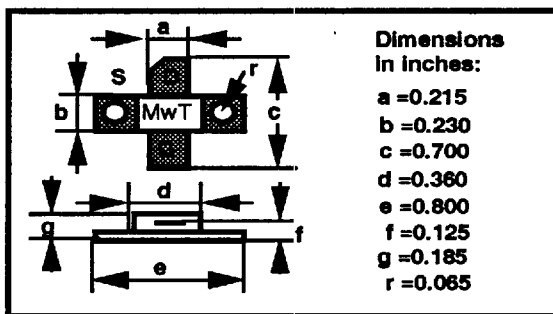


EQUIVALENT CIRCUIT

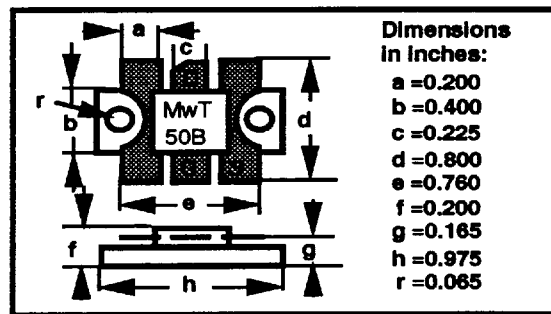


DEVICE	C1 [pf]	C2 [pf]	C3 [pf]	C4 [pf]	C5 [pf]	gm [mS]	L1 [nH]	L2 [nH]	L3 [nH]	R1 [Ω]	R2 [Ω]	R3 [Ω]
SU15A10LS	1.5	14	9	8	1.5	500	0.4	0.3	0.4	10	23	10
SU25A10LS	1.0	14	12	7	1.0	500	0.4	0.3	0.4	8	18	8
SU25B10LS	1.5	16	14	7	1.5	600	0.4	0.4	0.5	4	18	5
SU35A10LS	1.0	20	17	12	1.0	900	0.4	0.1	0.4	4	8	5
SU50A10LS	1.5	23	17	12	1.5	900	0.3	0.2	0.3	4	8	5
SU50B10LS	1.5	20	17	12	1.5	900	0.3	0.2	0.5	4	8	5
SU75D10LS	1.5	31	27	20	1.5	1400	0.2	0.1	0.2	3	6	4
SU80C10LS	1.0	20	17	12	1.0	800	0.2	0.1	0.2	4	8	5
SU100D10LS	1.5	45	35	27	1.5	1700	0.3	0.1	0.1	2	4	2
SU120D10LS	1.5	55	48	34	1.5	2400	0.1	0.1	0.1	2	3	2

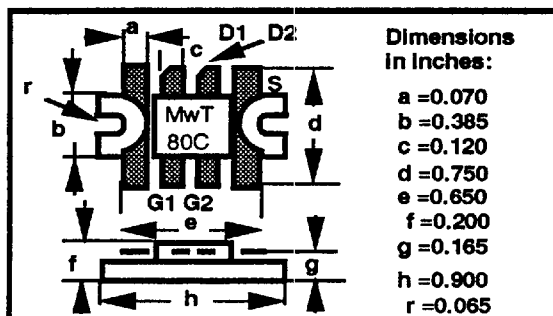
PACKAGE DRAWINGS



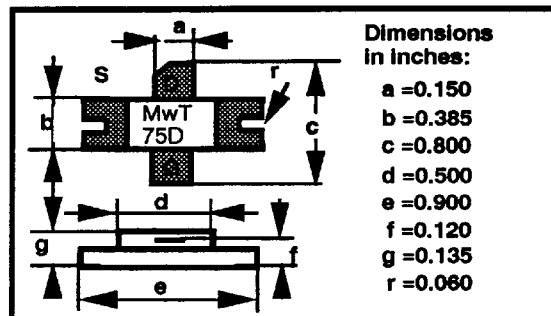
A



B



C



D

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SU-S.2 8/93