

VHF POWER MOSFET

N-Channel Enhancement Mode

DESCRIPTION:

The **ASI VFT150-50** is a gold metallized N-Channel Enhancement mode MOSFET intended for use in 50 Vdc large signal output to 200 MHz.

FEATURES:

- $P_G = 13.0$ dB Typ. at 175 MHz/150 W
- CS configuration; 50 Vdc operation
- **Omnigold™** Metalization System

MAXIMUM RATINGS

I_D	16 A
V_{DSS}	125 V
V_{GS}	± 30 V
P_{DISS}	300 W @ $T_C = 25^\circ C$
T_J	$-65^\circ C$ to $+200^\circ C$
T_{STG}	$-65^\circ C$ to $+150^\circ C$
θ_{JC}	$0.6^\circ C/W$

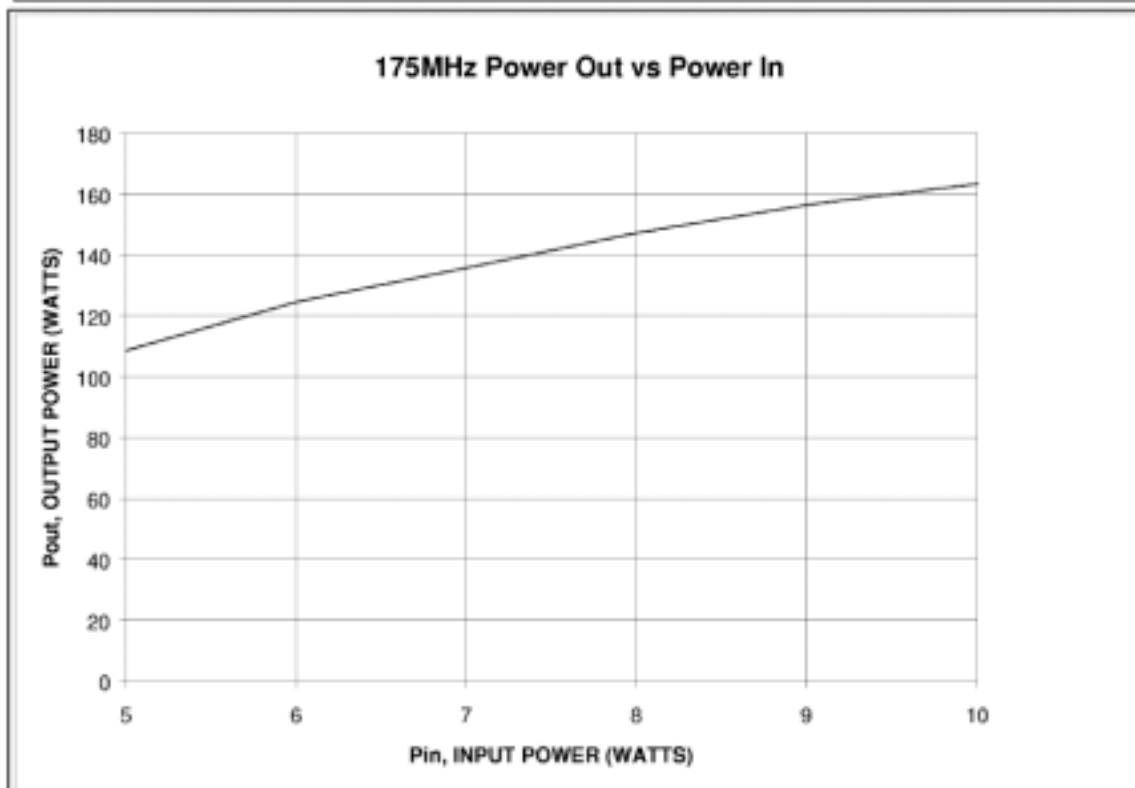
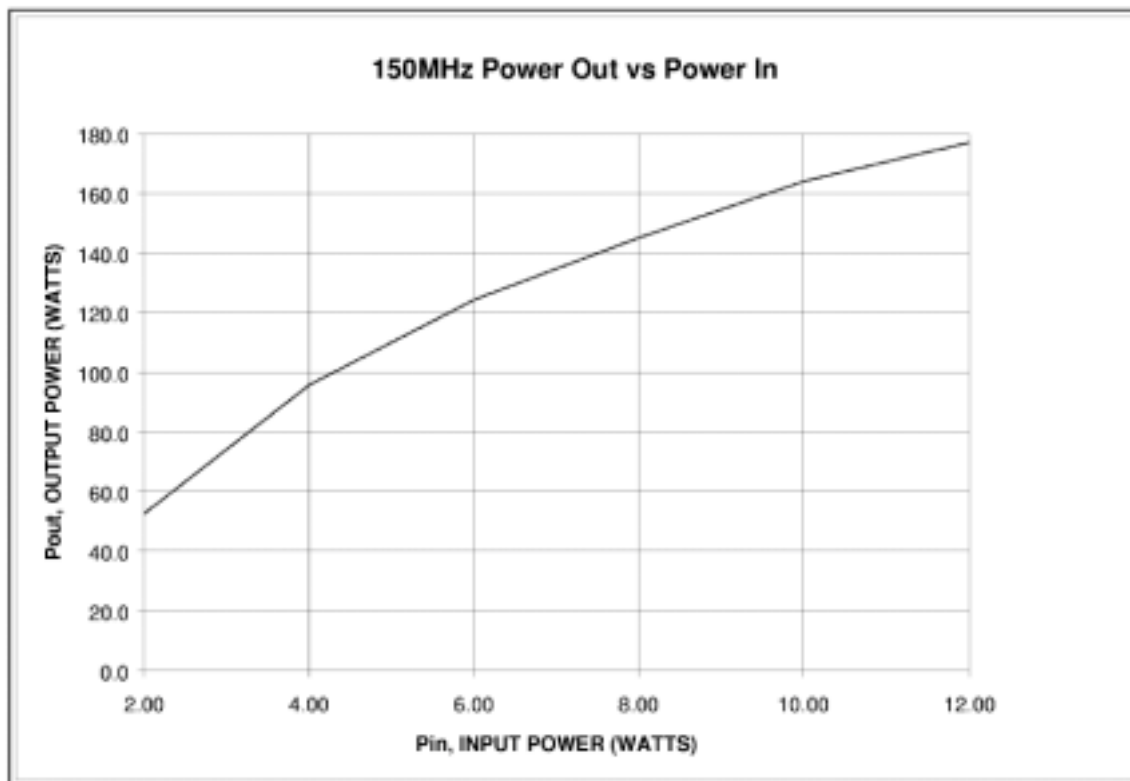
PACKAGE STYLE .500 4L FLG

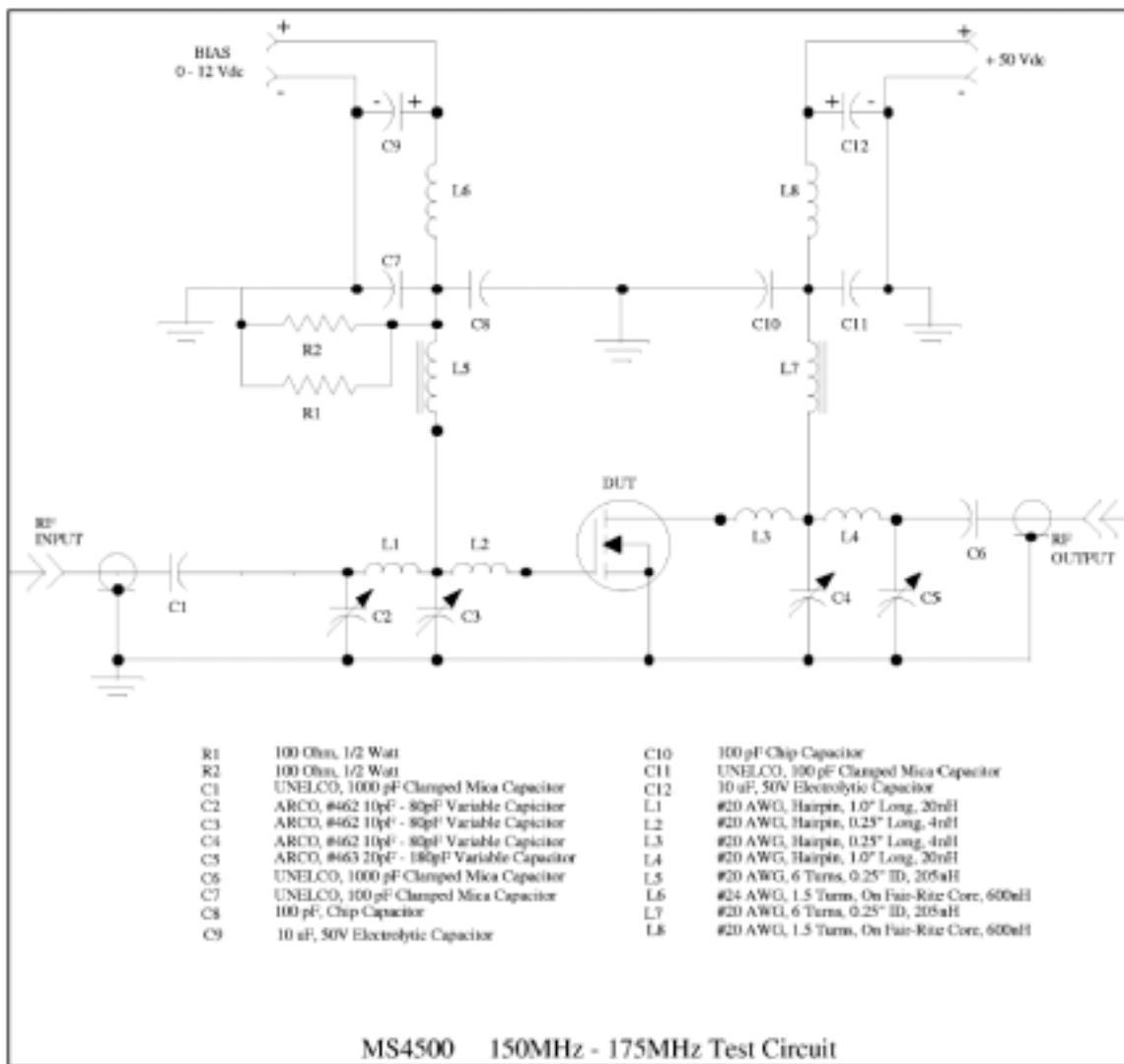
DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.220 / 5.59	.230 / 5.84
B	.125 / 3.18	
C	.245 / 6.22	.255 / 6.48
D	.720 / 18.28	.730 / 18.54
E	.125 / 3.18	
F	.970 / 24.64	.980 / 24.89
G	.495 / 12.57	.505 / 12.83
H	.003 / 0.08	.007 / 0.18
I	.090 / 2.29	.110 / 2.79
J	.150 / 3.81	.175 / 4.45
K	.280 / 7.11	
L	.980 / 24.89	1.050 / 26.67

ORDER CODE: ASI10709

CHARACTERISTICS $T_C = 25^\circ C$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{DSS}	$I_D = 50$ mA	125			V
I_{DSS}	$V_{DS} = 50$ V $V_{GS} = 0$ V			5.0	mA
I_{GSS}	$V_{DS} = 0$ V $V_{GS} = 20$ V			1.0	μA
V_{GS}	$V_{DS} = 10$ V $I_D = 100$ mA	1.0		5.0	V
g_{fs}	$V_{DS} = 10$ V $I_D = 5$ A	3.0			mho
C_{iss} C_{oss} C_{rss}	$V_{DS} = 50$ V $V_{GS} = 0$ V $f = 1.0$ MHz		290 130 28		pF
P_G η_D	$V_{DD} = 50$ V $I_{DQ} = 250$ mA $f = 175$ MHz $P_{out} = 150$ W (PEP) $P_{IN} = 6.0$ W	45	13.0 55		dB %





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|----|--|-----|--|
| R1 | 100 Ohm, 1/2 Watt | C10 | 100 pF Chip Capacitor |
| R2 | 100 Ohm, 1/2 Watt | C11 | UNELCO, 100 pF Clamped Mica Capacitor |
| C1 | UNELCO, 1000 pF Clamped Mica Capacitor | C12 | 10 uF, 50V Electrolytic Capacitor |
| C2 | ARCO, #462 10pF - 80pF Variable Capacitor | L1 | #20 AWG, Hairpin, 1.0" Long, 20nH |
| C3 | ARCO, #462 10pF - 80pF Variable Capacitor | L2 | #20 AWG, Hairpin, 0.25" Long, 4nH |
| C4 | ARCO, #462 10pF - 80pF Variable Capacitor | L3 | #20 AWG, Hairpin, 0.25" Long, 4nH |
| C5 | ARCO, #463 20pF - 180pF Variable Capacitor | L4 | #20 AWG, Hairpin, 1.0" Long, 20nH |
| C6 | UNELCO, 1000 pF Clamped Mica Capacitor | L5 | #20 AWG, 6 Turns, 0.25" ID, 205nH |
| C7 | UNELCO, 100 pF Clamped Mica Capacitor | L6 | #24 AWG, 1.5 Turns, On Fair-Rite Core, 600nH |
| C8 | 100 pF, Chip Capacitor | L7 | #20 AWG, 6 Turns, 0.25" ID, 205nH |
| C9 | 10 uF, 50V Electrolytic Capacitor | L8 | #20 AWG, 1.5 Turns, On Fair-Rite Core, 600nH |