

VHF POWER MOSFET

N-Channel Enhancement Mode

DESCRIPTION:

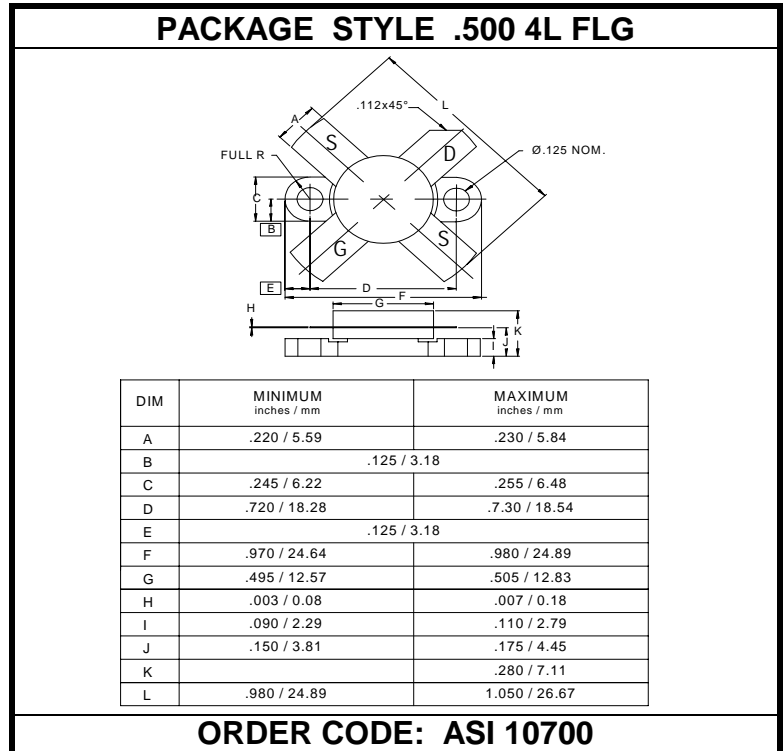
The **VFT150-28** is a gold metallized N-Channel enhancement mode MOSFET, intended for use in 28 VDC large signal applications to 175 MHz.

FEATURES:

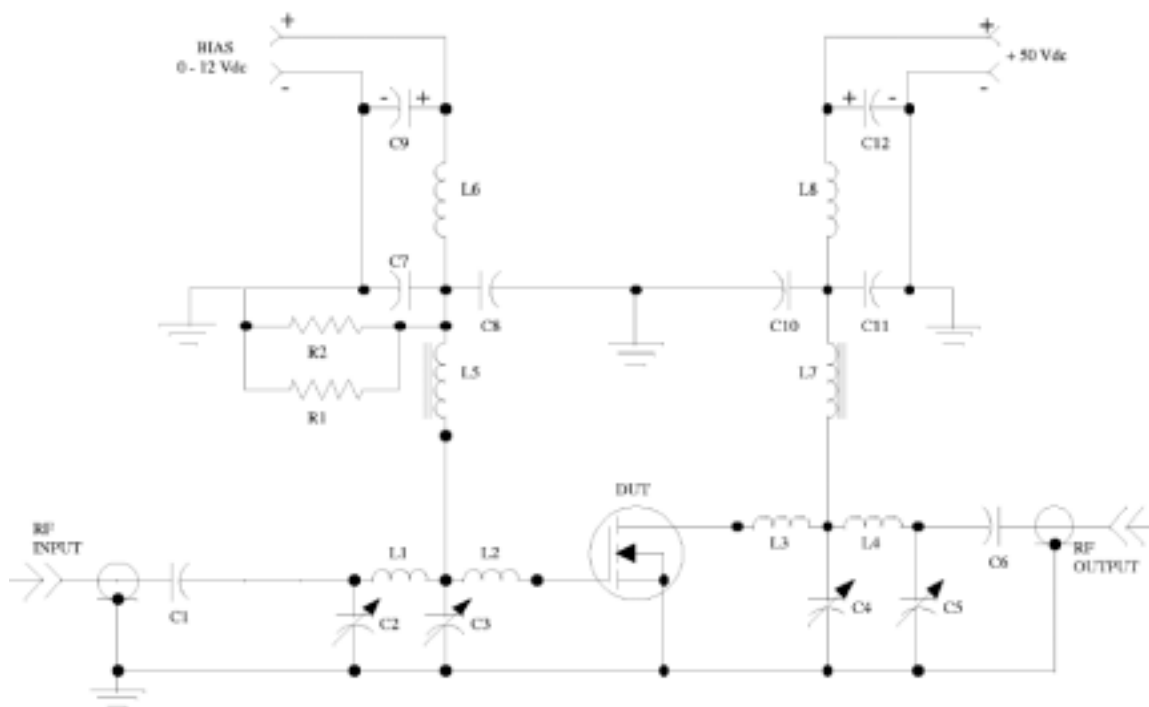
- $P_G = 10$ dB Typical at 175 MHz
- No thermal Runaway
- **Omnigold™** Metalization System
- Class-A or AB

MAXIMUM RATINGS

I_D	16 A
V_{DSS}	65 V
V_{GS}	± 40 V
V_{DGR}	65 V
P_{DISS}	300 W @ $T_C = 25^\circ\text{C}$
T_J	-65°C to $+200^\circ\text{C}$
T_{STG}	-65°C to $+150^\circ\text{C}$
θ_{JC}	0.6 $^\circ\text{C}/\text{W}$


CHARACTERISTICS $T_C = 25^\circ\text{C}$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{DSS}	$I_{DS} = 100$ mA	60			V
I_{DSS}	$V_{DS} = 28$ V $V_{GS} = 0$ V			5.0	mA
I_{GSS}	$V_{DS} = 0$ V $V_{GS} = 20$ V			1.0	μA
$V_{GS(th)}$	$I_D = 100$ mA $V_{DS} = 10$ V	1.0		5.0	V
g_{fs}	$I_D = 5$ A $V_{DS} = 10$ V	3.5			mho
C_{iss} C_{oss} C_{rss}	$V_{DS} = 28$ V $V_{GS} = 0$ V $f = 1.0$ MHz		375 188 26		pF
P_G η_D	$V_{DD} = 28$ V $I_{DQ} = 250$ mA $P_{out} = 150$ W $P_{IN} = 15$ W $f = 175$ MHz	8.5 50	10 60		dB %



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