

VHF POWER MOSFET

N-Channel Enhancement Mode

DESCRIPTION:

The **VFT30-28** is a gold metallized N-Channel enhancement mode MOSFET, intended for use in 28VDC large signal applications up to 400MHz.

FEATURES:

- $P_G = 14$ dB Typ. at 30 W /175MHz
- **10:1 Load VSWR** Capability
- **Omnigold™** Metalization System

MAXIMUM RATINGS

I_D	5.0 A
$V_{(BR)DSS}$	65 V
V_{DGR}	65 V
V_{GS}	± 40 V
P_{DISS}	100 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}	1.75 $^\circ\text{C/W}$

PACKAGE STYLE .380 4L FLG

DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.220 / 5.59	.230 / 5.84
B	.785 / 19.94	
C	.720 / 18.29	.730 / 18.54
D	.970 / 24.64	.980 / 24.89
E		.385 / 9.78
F	.004 / 0.10	.006 / 0.15
G	.085 / 2.16	.105 / 2.67
H	.160 / 4.06	.180 / 4.57
I		.280 / 7.11
J	.240 / 6.10	.255 / 6.48

ORDER CODE: ASI10703

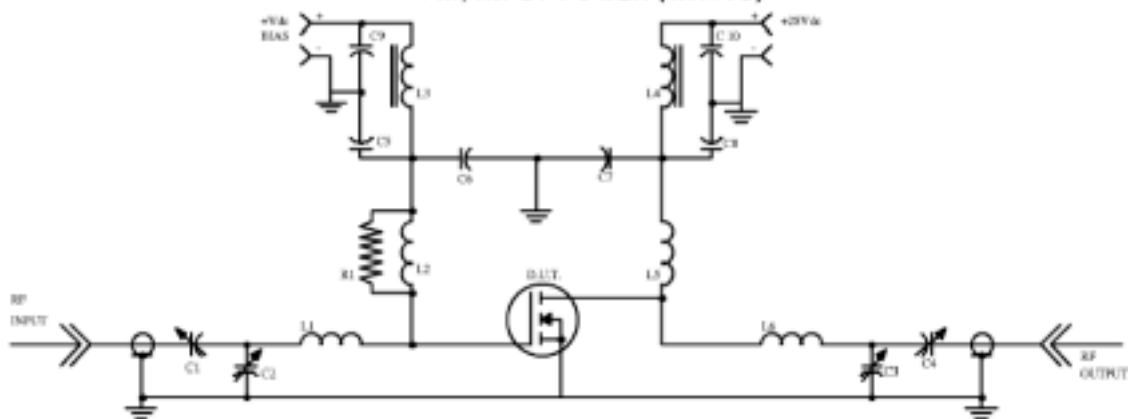
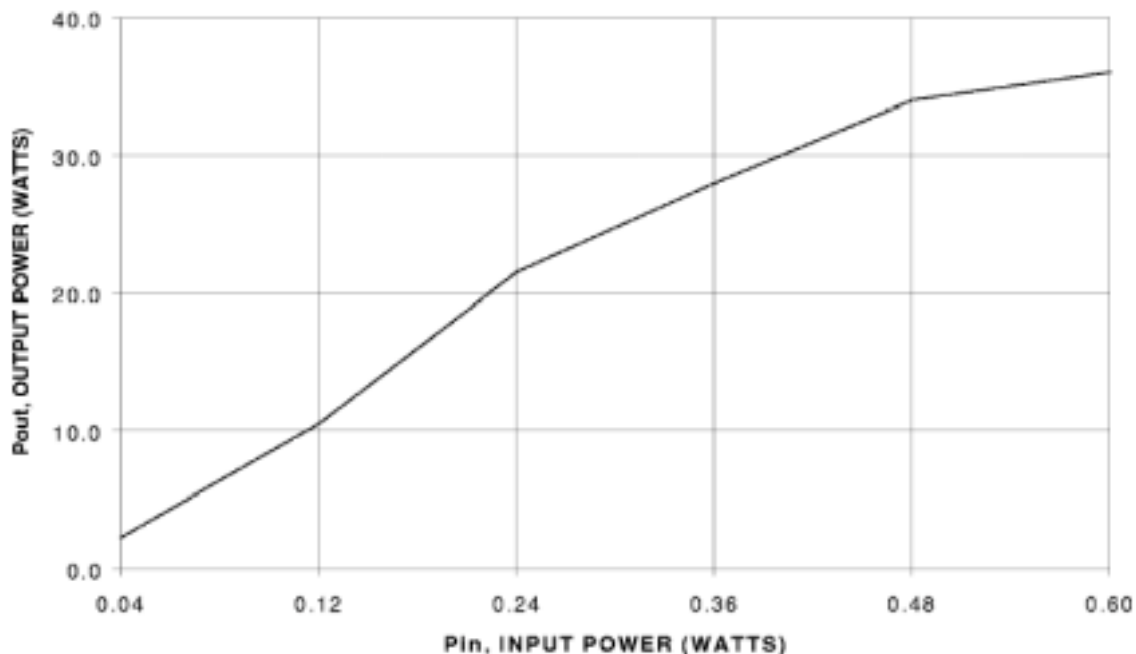
CHARACTERISTICS $T_C = 25^\circ\text{C}$

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
$V_{(BR)DSS}$	$V_{GS} = 0$ V	$I_{DS} = 10$ mA		60	---	---	V
I_{DSS}	$V_{DS} = 28$ V	$V_{GS} = 0$ V		---	---	4.0	mA
I_{GSS}	$V_{DS} = 0$ V	$V_{GS} = 20$ V		---	---	1.0	μA
V_{GS}	$V_{DS} = 10$ V	$I_D = 25$ mA		1.0	---	6.0	V
G_{FS}	$V_{DS} = 10$ V	$I_D = 500$ mA		0.5	---	---	mho
C_{iss}	$V_{DS} = 28$ V	$V_{GS} = 0$ V	$f = 1.0$ MHz		46		pF
C_{oss}					33		
C_{rss}					6.0		

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

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
P_G	$V_{DD} = 28\text{ V}$	$I_{DQ} = 25\text{ mA}$	$P_{OUT} = 30\text{ W}$	13	14		dB
η_D	$P_{IN} = 1.5\text{ W}$		$f = 175\text{ MHz}$	50	60		%

Power Out vs Power In



- R1 55 Ohm, 1/2 Watt
- C1 ARCO, 4425 16pF - 300pF Variable Capacitor
- C2 ARCO, 4463 20pF - 180pF Variable Capacitor
- C3 ARCO, 4462 16pF - 80pF Variable Capacitor
- C4 ARCO, 4423 16pF - 300pF Variable Capacitor
- C5 100pF, Chip Capacitor
- C6 UNELCO, 100pF Chip Capacitor
- C7 UNELCO, 100pF Chip Capacitor
- C8 100pF, Chip Capacitor
- C9 10uF, 63V Electrolytic Capacitor
- C10 10uF, 63V Electrolytic Capacitor
- L1 #20 AWG, 2 Turns, 0.25" ID, 19uH
- L2 #20 AWG, 6 Turns, 0.25" ID, On R1, 206uH
- L3 Fair-Rite P/N 284366661
- L4 Fair-Rite P/N 284366661
- L5 #20 AWG, 6 Turns, 0.25" ID, 206uH
- L6 #20 AWG, 2 Turns, 0.25" ID, 19uH