

# VHF POWER MOSFET

## N-Channel Enhancement Mode

**DESCRIPTION:**

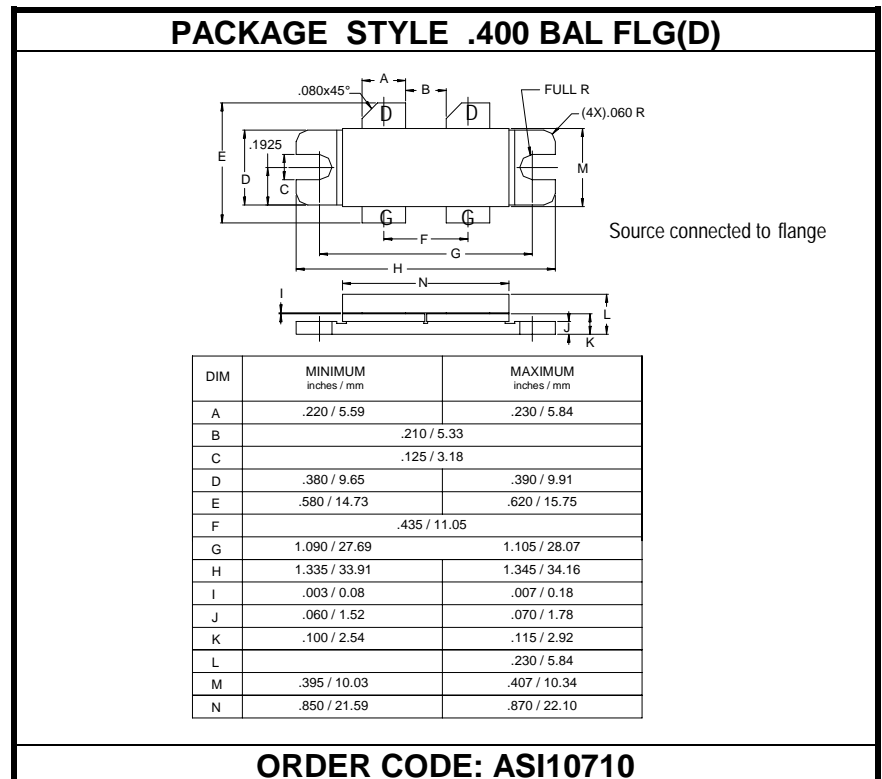
The **VFT300-50** is a gold metallized N-Channel Enhancement mode MOSFET intended for use in 50 Vdc large signal applications to 175 MHz.

**FEATURES:**

- $P_G = 15$  dB Typ. at 300W/ 175 MHz
- Common Base configuration
- Class-a or AB
- 50 V operation
- **Omnigold™** Metalization System

**MAXIMUM RATINGS**

$I_D$	40 A
$V_{DSS}$	125 V
$V_{GS}$	$\pm 40$ V
$P_{DISS}$	500 W @ $T_C = 25^\circ C$
$T_J$	$-65^\circ C$ to $+150^\circ C$
$T_{STG}$	$-65^\circ C$ to $+200^\circ C$
$\theta_{JC}$	0.35 $^\circ C/W$


**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	$\mu A$
$V_{GS(th)}$	$I_D = 100$ mA $V_{DS} = 10$ V	1.0		5.0	V
$g_{fs}$	$I_D = 5.0$ A $V_{DS} = 10$ V	3			mho
$C_{iss}$ $C_{oss}$ $C_{rss}$	$V_{DS} = 50$ V $V_{GS} = 0$ V $f = 1.0$ MHz		350 250 20		pF

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

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$P_G$	$V_{DD} = 50\text{ V}$ $I_{DQ} = 500\text{ mA}$ $P_{out} = 300\text{ W}$	14	15		dB
$\eta_D$	$f = 175\text{ MHz}$	60	65		%

