

# VHF POWER MOSFET

## N-Channel Enhancement Mode

**DESCRIPTION:**

The **VFT300-50** is Designed for AM/FM Power Amplifier Applications up to 250 MHz.

**FEATURES:**

- $P_G = 15$  dB Typ. at 300W/ 175 MHz
- 5:1 Load VSWR Capability
- **Omnigold™** Metalization System

**MAXIMUM RATINGS**

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

**PACKAGE STYLE .400 BAL FLG(D)**

DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.220 / 5.59	.230 / 5.84
B	.210 / 5.33	
C	.125 / 3.18	
D	.380 / 9.65	.390 / 9.91
E	.580 / 14.73	.620 / 15.75
F	.435 / 11.05	
G	1.090 / 27.69	1.105 / 28.07
H	1.335 / 33.91	1.345 / 34.16
I	.003 / 0.08	.007 / 0.18
J	.060 / 1.52	.070 / 1.78
K	.100 / 2.54	.115 / 2.92
L	.230 / 5.84	
M	.395 / 10.03	.407 / 10.34
N	.850 / 21.59	.870 / 22.10

**ORDER CODE: ASI10710**

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

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	mA
$V_{GS(th)}$	$I_D = 100$ mA $V_{DS} = 10$ V	1.0		5.0	V
$g_{fs}$	$I_D = 5.0$ A $V_{DS} = 10$ V	3,000			mS
$C_{iss}$ $C_{oss}$ $C_{rss}$	$V_{DS} = 50$ V $V_{GS} = 0$ V $f = 1.0$ MHz		350 250 20		pF
$P_G$ $h_D$	$V_{DD} = 50$ V $I_{DQ} = 500$ mA $P_{out} = 300$ W $f = 175$ MHz	14 60	15 65		dB %
$y$	$V_{SWR} = 5:1$ AT ALL PHASE ANGLES	NO DEGRADATION IN OUTPUT POWER			