

## VHF POWER MOSFET N-Channel Enhancement Mode

### DESCRIPTION:

The **ASI MRF138** is a N-Channel enhancement mode MOSFET, intended for use in 28V applications up to 175 MHz.

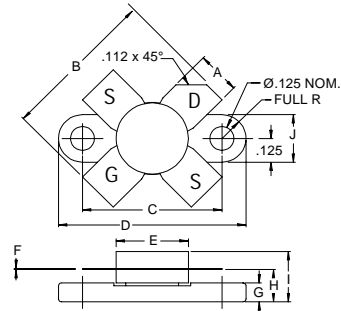
### FEATURES:

- $P_G = 17$  dB Typ. at 30 W /30MHz
- 30:1 Load VSWR Capability
- **Omnigold™** Metalization System

### MAXIMUM RATINGS

$I_D$	6.0 A
$V_{(BR)DSS}$	65 V
$V_{DGR}$	65 V
$V_{GS}$	$\pm 40$ V
$P_{DISS}$	115 W @ $T_C = 25^\circ\text{C}$
$T_J$	$-65^\circ\text{C}$ to $+200^\circ\text{C}$
$T_{STG}$	$-65^\circ\text{C}$ to $+150^\circ\text{C}$
$\theta_{JC}$	1.52 $^\circ\text{C}/\text{W}$

### 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

### 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		65	---	---	V
$I_{DSS}$	$V_{DS} = 28$ V	$V_{GS} = 0$ V		---	---	5.0	mA
$I_{GSS}$	$V_{DS} = 0$ V	$V_{GS} = 20$ V		---	---	0.1	$\mu\text{A}$
$V_{GS(th)}$	$V_{DS} = 10$ V	$I_D = 10$ mA		1.0	---	6.0	V
$G_{FS}$	$V_{DS} = 10$ V	$I_D = 2.5$ mA		0.8	---	---	mho
$C_{iss}$	$V_{DS} = 28$ V	$V_{GS} = 0$ V	$f = 1.0$ MHz		55		pF
$C_{oss}$					70		
$C_{rss}$					14		
$P_G$	$V_{DD} = 28$ V	$I_{DQ} = 100$ mA	$P_{OUT} = 30$ W		17		dB
$\eta_D$	$P_{IN} = 1.5$ W		$f = 175$ MHz		40		%