

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

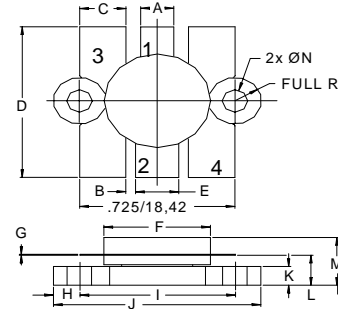
The **ASI MRF646** is designed for 12.5 UHF large signal applications up to 512 MHz.

**FEATURES:**

- Internal Input Matching Network
- $P_G = 4.8$  dB at 45 W/470 MHz
- **Omnigold™** Metalization System
- Common Emitter, 12.5 V operation

**MAXIMUM RATINGS**

$I_C$	9.0 A
$V_{CBO}$	36 V
$V_{CEO}$	16 V
$V_{EBO}$	4.0 V
$P_{DISS}$	117 W @ $T_C = 25^\circ\text{C}$
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +150 °C
$\theta_{JC}$	1.5 °C/W

**PACKAGE STYLE .500 6L FLG**


DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.150 / 3.43	.160 / 4.06
B	.045 / 1.14	
C	.210 / 5.33	.220 / 5.59
D	.835 / 21.21	.865 / 21.97
E	.200 / 5.08	.210 / 5.33
F	.490 / 12.45	.510 / 12.95
G	.003 / 0.08	.007 / 0.18
H	.125 / 3.18	
I	.725 / 18.42	
J	.970 / 24.64	.980 / 24.89
K	.090 / 2.29	.105 / 2.67
L	.150 / 3.81	.170 / 4.32
M	.285 / 7.24	
N	.120 / 3.05	.135 / 3.43

1 = COLLECTOR    2 = BASE    3&4 = EMITTER

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

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CEO}$	$I_C = 20$ mA	16			V
$BV_{CES}$	$I_C = 20$ mA	36			V
$BV_{EBO}$	$I_E = 5.0$ mA	4.0			V
$I_{CES}$	$V_{CE} = 15$ V			10	mA
$h_{FE}$	$V_{CE} = 5.0$ V $I_C = 4.0$ A	20		150	---
$C_{ob}$	$V_{CB} = 12.5$ V $f = 1.0$ MHz		90	125	pF
$P_G$	$V_{CE} = 12.5$ V $P_{OUT} = 45$ W $f = 470$ MHz	4.8	5.4		dB
$\eta_c$		55	60		%