

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

The **ASI ULBM25** is a gold metallized RF power transistor designed for 12.5 Class-C applications in 450-513 MHz frequency range. It utilizes Emitter Ballasting to achieve high reliability and ruggedness.

**FEATURES:**

- Internal Input Matching Network
- $P_G = 6.5$  dB at 25 W/470 MHz
- **Omnigold™** Metalization System
- Common Emitter, Class-C , 12.5 V

**MAXIMUM RATINGS**

$I_C$	4.8 A
$V_{CBO}$	36 V
$V_{CEO}$	16 V
$V_{CES}$	36 V
$V_{EBO}$	4.0 V
$P_{DISS}$	70 W @ $T_C = 25^\circ\text{C}$
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +150 °C
$\theta_{JC}$	2.5 °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

**ORDER CODE: ASI10683**

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

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CEO}$	$I_C = 50$ mA	16			V
$BV_{CES}$	$I_C = 10$ mA	36			V
$BV_{EBO}$	$I_E = 5.0$ mA	4.0			V
$I_{CES}$	$V_{CE} = 12.5$ V			5	mA
$h_{FE}$	$V_{CE} = 5.0$ V $I_C = 1.0$ A	10		150	---

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

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$C_{OB}$	$V_{CB} = 12.5\text{ V}$ $f = 1.0\text{ MHz}$			80	pF
$P_G$ $\eta_c$	$V_{CC} = 12.5\text{ V}$ $P_{OUT} = 25\text{ W}$ $f = 470\text{ MHz}$	6.5	60		dB %

**IMPEDANCE DATA**

FREQ (MHz)	$Z_{IN} (\Omega)$	$Z_{CL} (\Omega)$
450	$108 - j2.0$	$1.9 - j0.75$
470	$1.6 - j1.6$	$2.0 - j0.5$
512	$1.1 - j2.1$	$1.4 - j1.3$

$P_{OUT} = 25\text{ W}$   
 $V_{CE} = 12.5\text{ V}$