

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

The **ASI ULBM5** is a gold metallized RF power transistor designed for 12.5 V, Class-C UHF communications applications. It utilizes emitter ballasting to achieve high reliability & ruggedness.

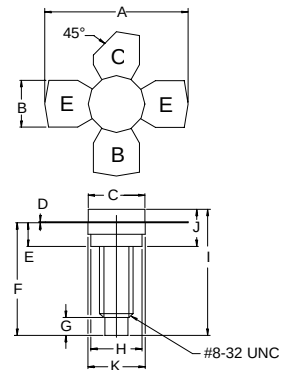
FEATURES:

- Common Emitter, 12.5 V operation
- $P_G = 8.5$ dB at 5.0 W/470 MHz
- **Omnigold™** Metalization System

MAXIMUM RATINGS

I_C	2.0 A
V_{CBO}	36 V
V_{CER}	18 V
V_{CES}	36 V
V_{EBO}	4.0 V
P_{DISS}	37 W @ $T_C = 25^\circ\text{C}$
T_J	-65°C to $+200^\circ\text{C}$
T_{STG}	-65°C to $+150^\circ\text{C}$
θ_{JC}	11.6 $^\circ\text{C/W}$

PACKAGE STYLE .280 4L STUD



DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	1.010 / 25.65	1.055 / 26.80
B	.220 / 5.59	.230 / 5.84
C	.270 / 6.86	.285 / 7.24
D	.003 / 0.08	.007 / 0.18
E	.117 / 2.97	.137 / 3.48
F	.572 / 14.53	
G	.130 / 3.30	
H	.245 / 6.22	.255 / 6.48
I	.640 / 16.26	
J	.175 / 4.45	.217 / 5.51
K	.275 / 6.99	.285 / 7.24

ORDER CODE: ASI10680

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}	$I_E = 2.0$ mA	4.0			V
I_{CBO}	$V_{CB} = 15$ V			1.0	mA
h_{FE}	$V_{CE} = 5.0$ V $I_C = 200$ mA	20	---	---	---

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

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
C_{ob}	$V_{CB} = 12\text{ V}$		$f = 1.0\text{ MHz}$	---	19	---	pF
P_G	$V_{CC} = 12.5\text{ V}$ $P_{OUT} = 5.0\text{ W}$	$P_{IN} = 0.70\text{ W}$	$f = 470\text{ MHz}$	8.5			dB

IMPEDANCE DATA

FREQ	$Z_{IN} (\Omega)$	$Z_{CL} (\Omega)$
450	$1.4 + j2.0$	$10.4 - j6.9$
470	$1.4 + j2.9$	$11.4 + j5.8$
512	$1.5 + j3.4$	$11.9 + j3.2$