

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

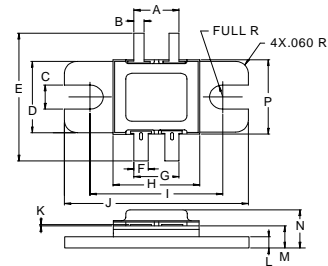
The **ASI TVU020** is a common emitter RF bipolar transistor capable of providing 20 W peak, Class-A, RF power output over 470-860 MHz. It utilizes emitter ballasting & input impedance matching to provide broadband performance.

**FEATURES:**

- 470-860 MHz
- Common Emitter
- $P_G = 8.5$  dB at 20 W/860 MHz
- **Omnigold™** Metalization System
- InPut bradband matching

**MAXIMUM RATINGS**

$I_C$	4.5 A
$V_{CEO}$	28 V
$V_{CES}$	50 V
$V_{EBO}$	4.0 V
$P_{DISS}$	80 W @ $T_C = 25$ °C
$T_J$	-65°C to +200°C
$T_{STG}$	-65 °C to +150 °C
$\theta_{JC}$	1.2 °C/W

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


DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.210 / 5.33	.230 / 5.84
B	.045 / 1.14	.055 / 1.40
C	.125 / 3.18	.135 / 3.43
D	.380 / 9.65	.390 / 9.91
E	.770 / 19.56	.830 / 21.08
F	.070 / 1.78	.080 / 2.03
G	.215 / 5.46	.235 / 5.97
H	.420 / 10.67	.430 / 10.92
I	.645 / 16.38	.655 / 16.64
J	.895 / 22.73	.905 / 22.99
K	.002 / 0.05	.006 / 0.15
L	.058 / 1.47	.065 / 1.65
M	.115 / 2.92	.130 / 3.30
N		.230 / 5.84
P	.395 / 10.03	.405 / 10.29

**ORDER CODE: ASI10648**
**CHARACTERISTICS**  $T_C = 25$  °C

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CEO}$	$I_C = 40$ mA	28			V
$BV_{CES}$	$I_C = 20$ mA	50			V
$BV_{EBO}$	$I_E = 10$ mA	4.0			V
$I_{CEO}$	$V_{CE} = 26.5$ V	---		5.0	mA
$h_{FE}$	$V_{CE} = 5.0$ V $I_C = 1.0$ A	10		150	---
$P_G$	$V_{CE} = 26.5$ V $P_{OUT} = 20$ W $f = 470-860$ MHz	8.5	9.5		dB
$IMD_3$	$I_C = 2 \times 1350$ Ma $P_{IN} = 2.8$ W	-46	-48	-46	dBc

<b>LOAD MISMATCH</b>	$V_{CE} = 26.5\text{ V}$	$P_{OUT} = 20\text{ W}$	$f = 860\text{ MHz}$			3:1	VSWR
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### POWER OUTPUT vs POWER INPUT

$V_{CC} = 26.5\text{V}$ , Frequency 860MHz

