

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

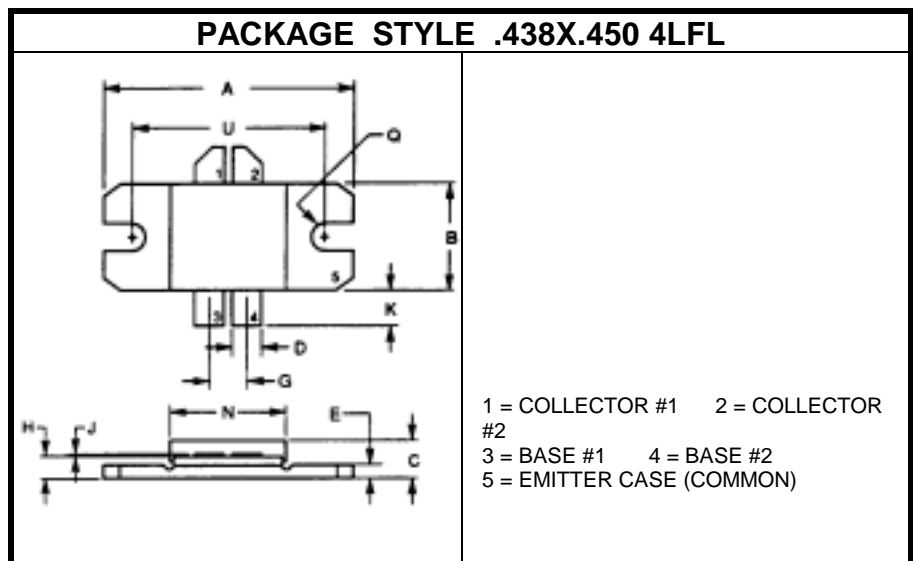
The **ASI TPV8100B** is Designed for Transmitter Output Stages Covering TV Band IV and V, Operating at 28 V.

**FEATURES INCLUDE:**

- Internal Input, Output Matching
- Common Emitter Configuration
- Gold Metalization
- Emitter Ballasting

**MAXIMUM RATINGS**

$I_C$	12 A
$V_{CER}$	40 V $R_{BE} = 10 \Omega$
$P_{DISS}$	215 W @ $T_C = 25^\circ C$
$T_J$	$-65^\circ C$ to $+200^\circ C$
$T_{STG}$	$-65^\circ C$ to $+150^\circ C$
$\theta_{JC}$	$0.8^\circ C/W$


**CHARACTERISTICS**  $T_C = 25^\circ C$ 

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CER}$	$I_C = 10 \text{ mA}$	$R_{BE} = 75 \Omega$		30			V
$BV_{CBO}$	$I_C = 20 \text{ mA}$			65			V
$BV_{EBO}$	$I_E = 10 \text{ mA}$			4.0			V
$I_{CER}$	$V_{CE} = 28 \text{ V}$	$R_{BE} = 75 \Omega$				10	mA
$h_{FE}$	$V_{CE} = 10 \text{ V}$	$I_C = 2.0 \text{ A}$		30		120	---
$G_p$	$V_{CE} = 28 \text{ V}$	$I_{cq} = 2X50 \text{ mA}$	$f = 860 \text{ MHz}$	8.5			dB
$\eta$	$V_{CE} = 28 \text{ V}$	$I_{cq} = 2X50 \text{ mA}$	$f = 860 \text{ MHz}$	55			%
$P_{out}$	$V_{CE} = 28 \text{ V}$	$I_{cq} = 2X50 \text{ mA}$	$f = 860 \text{ MHz}$ 1.0 dB COMPRESSION (ref = 25 W)	100			W

**FUNCTIONAL TESTS IN VIDEO (STANDARD BLACK LEVEL)**

$P_{out}$	$V_{CE} = 28 \text{ V}$	$I_{cq} = 2X50 \text{ mA}$	$f = 860 \text{ MHz}$	125			W
$P_{out}$	$V_{CE} = 32 \text{ V}$	$I_{cq} = 2X25 \text{ mA}$	$f = 860 \text{ MHz}$	150			W