



# Wireless Bipolar Power Transistor, 75W 850 - 960 MHz

PH0810-75

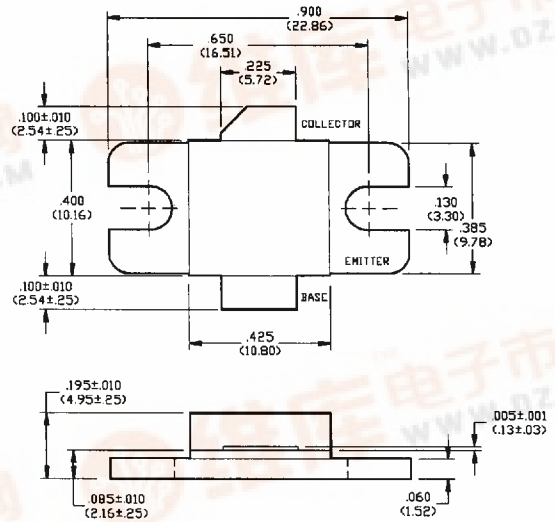
V2.00

## Features

- Designed for Linear Amplifier Applications
- Class AB: -32 dBc Typ 3rd IMD at 75 Watts PEP
- Common Emitter Configuration
- Internal Input and Output Impedance Matching
- Diffused Emitter Ballasting

## Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CES}$	60	V
Emitter-Base Voltage	$V_{EBO}$	3.0	V
Collector Current	$I_C$	12	A
Total Power Dissipation	$P_{TOT}$	125	W
Junction Temperature	$T_J$	200	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C
Thermal Resistance	$\theta_{JC}$	1.4	°C/W



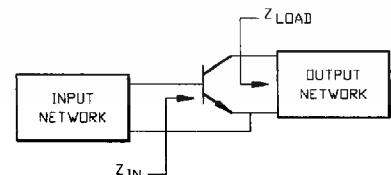
UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES ±.005\* (MILLIMETERS ±.13MM)

## Electrical Characteristics at 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	$BV_{CES}$	60	-	V	$I_C=50$ mA
Collector-Emitter Leakage Current	$I_{CES}$	-	8.0	mA	$V_{CE}=26.0$ V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	24	-	V	$I_C=100$ mA
Emitter-Base Breakdown Voltage	$BV_{EBO}$	3.0	-	V	$I_B=50$ mA
DC Forward Current Gain	$h_{FE}$	15	120	-	$V_{CE}=5.0$ V, $I_C=1.0$ A
Power Gain	$G_p$	10	-	dB	$V_{CC}=26$ V, $I_{CO}=150$ mA, $P_{OUT}=75$ W PEP, $F=900$ MHz, $\Delta F=100$ kHz
Collector Efficiency	$\eta_c$	35	-	%	$V_{CC}=26$ V, $I_{CO}=150$ mA, $P_{OUT}=75$ W PEP, $F=900$ MHz, $\Delta F=100$ kHz
Input Return Loss	RL	10	-	dB	$V_{CC}=26$ V, $I_{CO}=150$ mA, $P_{OUT}=75$ W PEP, $F=900$ MHz, $\Delta F=100$ kHz
Load Mismatch Tolerance	VSWR-T	-	5.0:1	-	$V_{CC}=26$ V, $I_{CO}=150$ mA, $P_{OUT}=75$ W PEP, $F=900$ MHz, $\Delta F=100$ kHz
3rd Order IMD	IMD <sub>3</sub>	-	-28	dBc	$V_{CC}=26$ V, $I_{CO}=150$ mA, $P_{OUT}=75$ W PEP, $F=900$ MHz, $\Delta F=100$ kHz

## Typical Optimum Device Impedances

F(MHz)	$Z_{in}(\Omega)$	$Z_{LOAD}(\Omega)$
850	$1.1 + j3.5$	$1.7 - j3.0$
900	$1.7 + j3.1$	$1.7 - j2.8$
960	$1.7 + j2.5$	$1.2 - j2.9$



Specifications Subject to Change Without Notice.