



Wireless Power Transistor

PH0810-60

60 Watts, 850-960 MHz

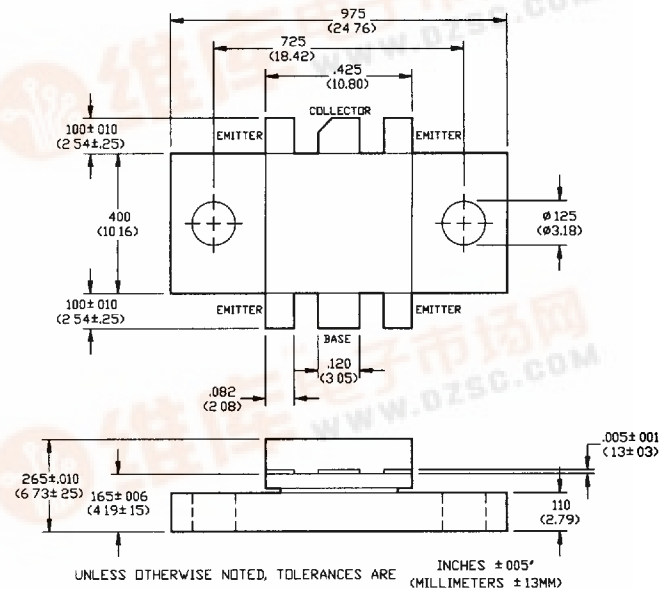
Features

- Designed for Linear Amplifier Applications
- Class AB: -32dBc Typ 3rd IMD at 60 Watts PEP
- Common Emitter Configuration
- Internal Input 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	10	A
Power Dissipation	P_D	100	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-55 to +150	°C
Thermal Resistance	θ_{JC}	1.7	°C/W

Outline Drawing



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	$I_C=80$ 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, $I_{CQ}=200$ mA, $P_{OUT}=60$ W, $F=900$ MHz
Collector Efficiency	η_C	55	-	%	$V_{CC}=26$ V, $I_{CQ}=200$ mA, $P_{OUT}=60$ W, $F=900$ MHz
Input Return Loss	RL	10	-	dB	$V_{CC}=26$ V, $I_{CQ}=200$ mA, $P_{OUT}=60$ W, $F=900$ MHz
Load Mismatch Tolerance	VSWR-T	-	5.0:1	-	$V_{CC}=26$ V, $I_{CQ}=200$ mA, $P_{OUT}=60$ W PEP, $F=900$ MHz, $\Delta F=100$ kHz
3rd Order IMD	IMD ₃	-	-30	dBc	$V_{CC}=26$ V, $I_{CQ}=200$ mA, $P_{OUT}=60$ W PEP, $F=900$ MHz, $\Delta F=100$ kHz

Typical Optimum Device Impedances

F(MHz)	$Z_{IN}(\Omega)$	$Z_{LOAD}(\Omega)$
800	$1.2 + j2.0$	$3.5 - j1.0$
850	$1.4 + j2.0$	$3.0 - j1.1$
900	$1.5 + j1.8$	$2.8 - j1.1$
960	$1.5 + j1.3$	$2.2 - j1.3$

