

14 Watts, 1.55-1.65 GHz

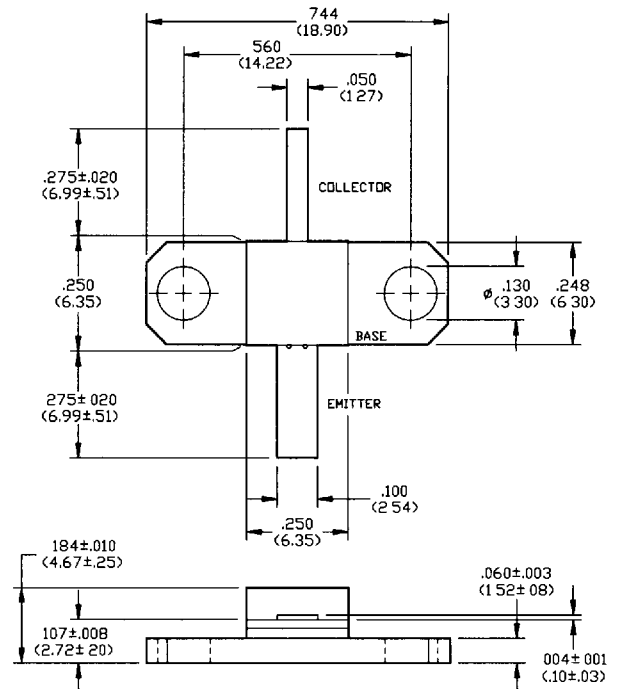
Features

- CW Operation
- Internal Impedance Matching
- Common Base Configuration
- Multilayer Metal / Ceramic Package
- Gold Metallization System

Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Collector-Base Voltage	V_{CBO}	56	V
Collector-Emitter Voltage	V_{CES}	56	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current	I_C	0.96	A
Power Dissipation	P_D	25	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-55 to +150	°C
Thermal Resistance	θ_{JC}	6	°C/W

Outline Drawing



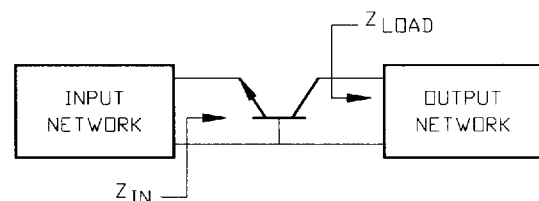
UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES ± 0.005* (MILLIMETERS ± 0.13MM)

Electrical Characteristics at 25°C

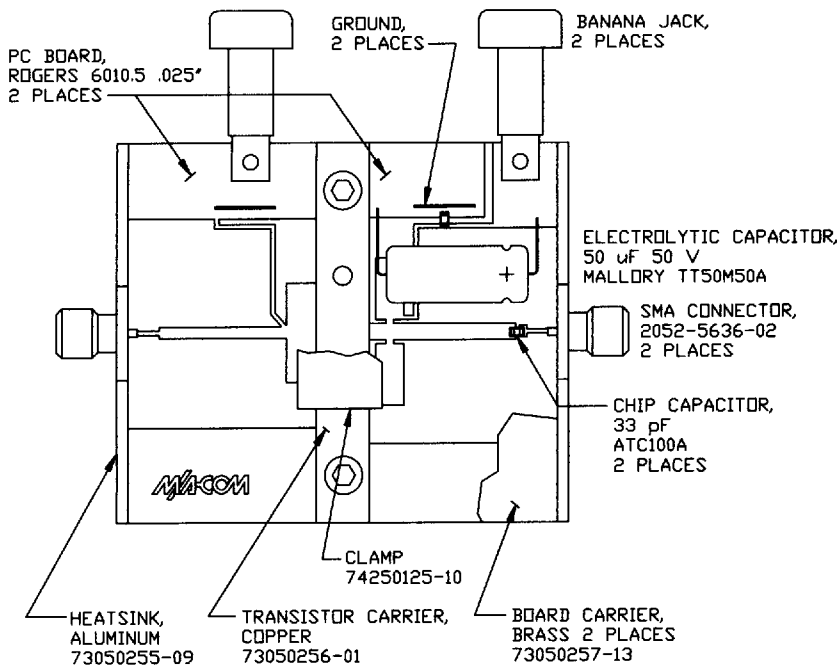
Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	BV_{CES}	56	-	V	$I_C=10$ mA
Collector-Emitter Leakage Current	I_{CES}	-	2.0	mA	$V_{CE}=28$ V
Emitter-Base Breakdown Voltage	BV_{EBO}	3.0	-	V	$I_B=2.5$ mA
DC Forward Current Gain	h_{FE}	15	120	-	$V_{CE}=5$ V, $I_C=200$ mA
Power Gain	G_P	6.5	-	dB	$V_{CC}=28$ V, $P_{OUT}=14$ W, $F=1.55, 1.60, 1.65$ GHz
Collector Efficiency	η_C	45	-	%	$V_{CC}=28$ V, $P_{OUT}=14$ W, $F=1.55, 1.60, 1.65$ GHz
Input Return Loss	RL	10	-	dB	$V_{CC}=28$ V, $P_{OUT}=14$ W, $F=1.55, 1.60, 1.65$ GHz
Load Mismatch Tolerance	VSWR-T	-	5.0:1	-	$V_{CC}=28$ V, $P_{OUT}=14$ W, $F=1.55, 1.60, 1.65$ GHz

Typical Device Impedances

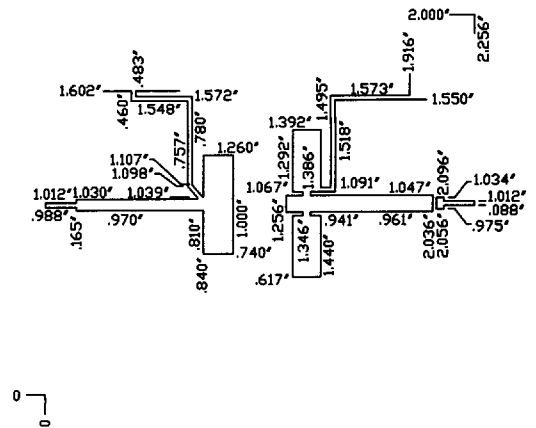
F(GHz)	$Z_{IN}(\Omega)$	$Z_{LOAD}(\Omega)$
1.55	$5.9 + j6.7$	$3.7 + j0.7$
1.60	$5.7 + j6.7$	$3.5 + j0.9$
1.65	$5.7 + j6.8$	$3.4 + j1.0$



Broadband Test Fixture Electrical Schematic



TOP VIEW



CIRCUIT DIMENSIONS