

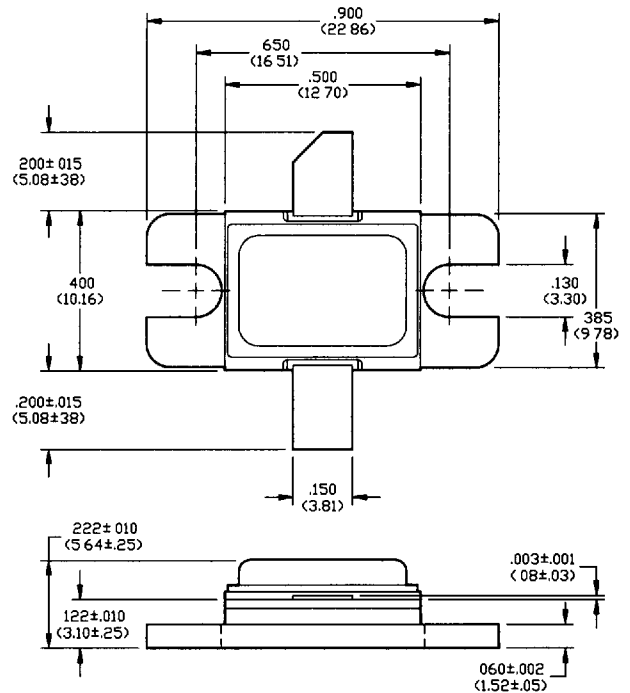
Preliminary

400 Watts, 1030-1090 MHz, 10 μ s Pulse, 1% Duty

Features

- Designed for Short Pulse IFF Applications
- NPN Silicon Microwave Power Transistor
- Common Base Configuration
- Broadband Class C Operation
- High Efficiency Interdigitated Geometry
- Diffused Emitter Ballasting Resistors
- Gold Metallization System
- Internal Input and Output Impedance Matching
- Hermetic Metal/Ceramic Package

Outline Drawing



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

Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CES}	80	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current (Peak)	I_C	18	A
Power Dissipation	P_D	1.2	kW
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-65 to +200	°C

Electrical Characteristics at 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	BV_{CES}	80	-	V	$I_C=125$ mA
Collector-Emitter Leakage Current	I_{CES}	-	12.5	mA	$V_{CE}=45$ V
Thermal Resistance	$R_{TH(JC)}$	-	0.08	°C/W	$V_{CC}=50$ V, $P_{OUT}=400$ W, $F=1090$ MHz
Input Power	P_{IN}	-	72	W	$V_{CC}=50$ V, $P_{OUT}=400$ W, $F=1090$ MHz
Power Gain	G_P	7.5	-	dB	$V_{CC}=50$ V, $P_{OUT}=400$ W, $F=1090$ MHz
Collector Efficiency	η_C	55	-	%	$V_{CC}=50$ V, $P_{OUT}=400$ W, $F=1090$ MHz
Input Return Loss	RL	9	-	dB	$V_{CC}=50$ V, $P_{OUT}=400$ W, $F=1090$ MHz
Load Mismatch Tolerance	VSWR-T	-	10:1	-	$V_{CC}=50$ V, $P_{OUT}=400$ W, $F=1090$ MHz
Load Mismatch Stability	VSWR-S	-	1.5:1	-	$V_{CC}=50$ V, $P_{OUT}=400$ W, $F=1090$ MHz

Broadband Test Fixture Impedances

F(MHz)	$Z_{IF}(\Omega)$	$Z_{OF}(\Omega)$
1030	TBD	TBD
1090	TBD	TBD

