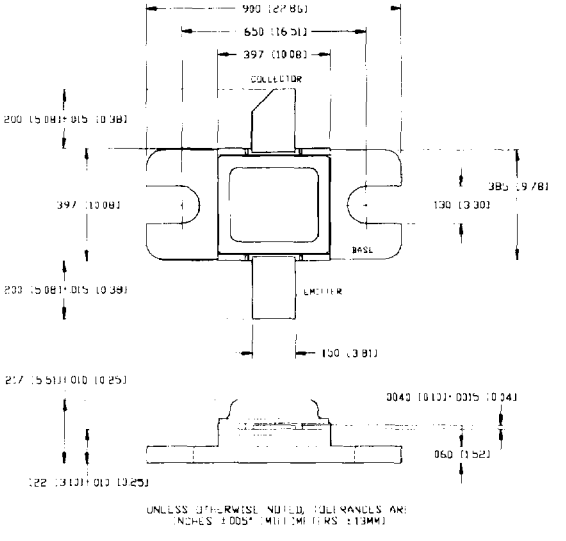
Avionics Pulsed Power Transistor, 35W, TDMA Format 960 - 1215 MHz

PH0912-35

V1.00

Features

- NPN Silicon Microwave Power Transistor
- Common Base Configuration
- Broadband Class C Operation
- High Efficiency Interdigitated Geometry
- Diffused Emitter Ballasting Resistors
- Gold Metalization System
- Internal Input Impedance Matching
- Hermetic Metal/Ceramic Package



Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CES}	65	V
Emitter-Base Voltage	V_{EBO}	3.0	V
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}	65	-	V	I_C=100 mA
Collector-Emitter Leakage Current	I_{CES}	-	30	mA	V_{CE}=65 V
Input Power	P_{IN}	3.5	7.0	W	V_{CC}=36.6 V, P_{OUT}=35 W, F=960, 1090, 1215 MHz, N1
Power Gain	G_P	7.0	10	dB	V_{CC}=36.6 V, P_{OUT}=35 W, F=960, 1090, 1215 MHz, N1
Collector Efficiency	η_C	35	-	%	V_{CC}=36.6 V, P_{OUT}=35 W, F=960, 1090, 1215 MHz, N1
Input Return Loss	RL	8	-	dB	V_{CC}=36.6 V, P_{OUT}=35 W, F=960, 1090, 1215 MHz, N1
Load Mismatch Tolerance	VSWR-T	-	2:1	-	V_{CC}=36.6 V, P_{OUT}=35 W, F=960, 1090, 1215 MHz, N1
Load Mismatch Stability	VSWR-S	-	5:1	-	V_{CC}=36.6 V, P_{OUT}=35 W, F=1090 MHz, N1

N1: TDMA pulse format consists of 6.4us ON, 6.6us OFF pulses which repeat for 3.354ms which is then OFF for 4.4585ms

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