

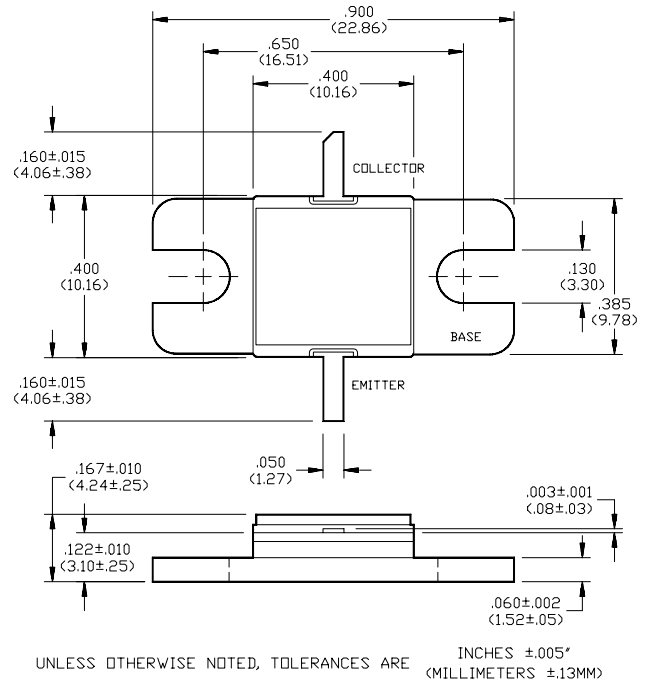


PH2729-25M
RADAR PULSED POWER TRANSISTOR
25 WATTS, 2.70-2.90 GHz, 100µs PULSE, 10% DUTY

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 and Output Impedance Matching
- * Hermetic Metal/Ceramic Package

OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS AT 25°C

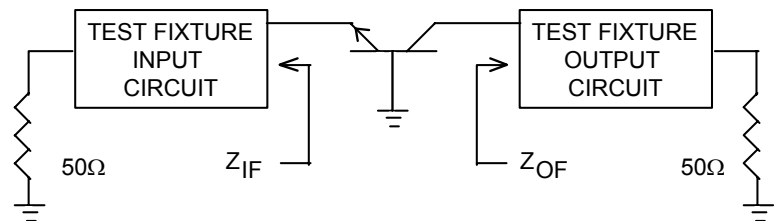
Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CES}	65	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current (Peak)	I_C	4.0	A
Total Power Dissipation @ +25°C	P_{TOT}	120	W
Storage Temperature	T_{STG}	-65 to +200	°C
Junction Temperature	T_j	200	°C

ELECTRICAL CHARACTERISTICS AT 25°C

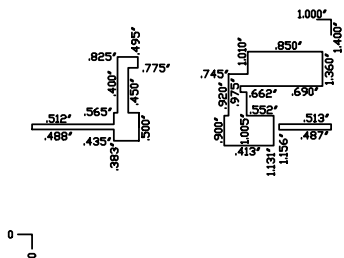
Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	BV_{CES}	65	-	V	$I_C=10mA$
Collector-Emitter Leakage Current	I_{CES}	-	1.5	mA	$V_{CE}=40V$
Thermal Resistance	$R_{TH(JC)}$	-	1.25	°C/W	$V_{CC}=36V, Pin=3.0W, F=2.7, 2.8, 2.9GHz$
Output Power	P_O	25	-	W	$V_{CC}=36V, Pin=3.0W, F=2.7, 2.8, 2.9GHz$
Power Gain	G_P	9.2	-	dB	$V_{CC}=36V, Pin=3.0W, F=2.7, 2.8, 2.9GHz$
Collector Efficiency	η	45	-	%	$V_{CC}=36V, Pin=3.0W, F=2.7, 2.8, 2.9GHz$
Input Return Loss	RL	6	-	dB	$V_{CC}=36V, Pin=3.0W, F=2.7, 2.8, 2.9GHz$
Load Mismatch Tolerance	VSWR-T	-	3:1	-	$V_{CC}=36V, Pin=3.0W, F=2.7, 2.8, 2.9GHz$
Load Mismatch Stability	VSWR-S	-	1.5:1	-	$V_{CC}=36V, Pin=3.0W, F=2.7, 2.8, 2.9GHz$

BROADBAND TEST FIXTURE IMPEDANCE

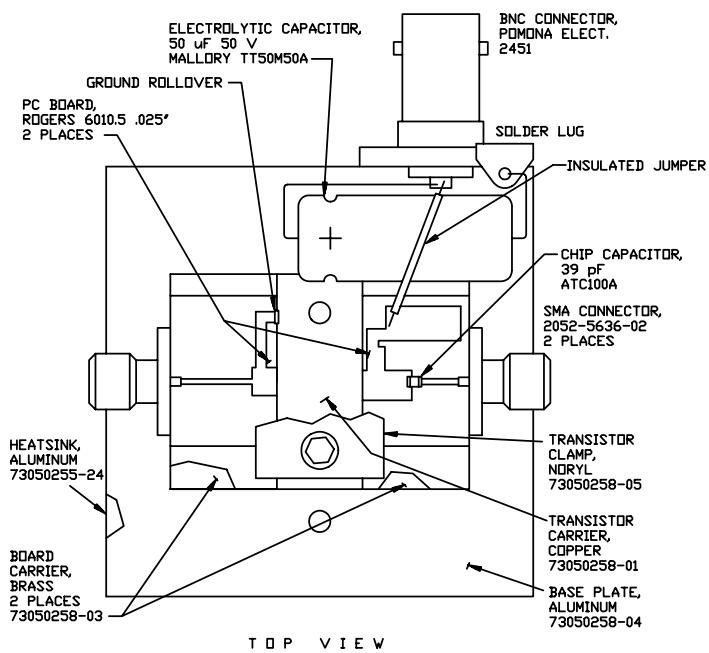
F (GHz)	$Z_{IF} (\Omega)$	$Z_{OF} (\Omega)$
2.70	38 - j14.4	17.1 - j8.7
2.80	35 - j16.3	15.0 - j8.7
2.90	33 - j17.8	13.3 - j8.3



TEST FIXTURE ELECTRICAL SCHEMATIC - PH2729-25M



CIRCUIT DIMENSIONS



TOP VIEW