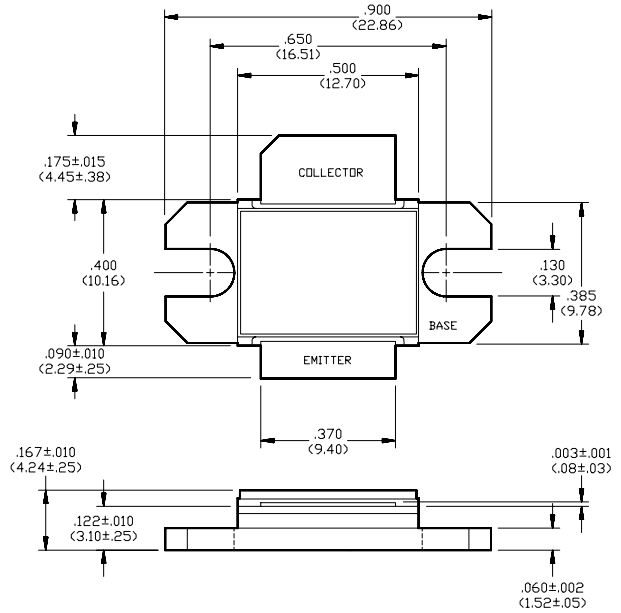


MAPRST2729-170M
RADAR PULSED POWER TRANSISTOR
170 Wpk, 2700 - 2900 MHz, 100µs Pulse Width, 10% Duty Cycle

FEATURES

- Designed for ATC Radar 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



ABSOLUTE MAXIMUM RATINGS AT 25°C

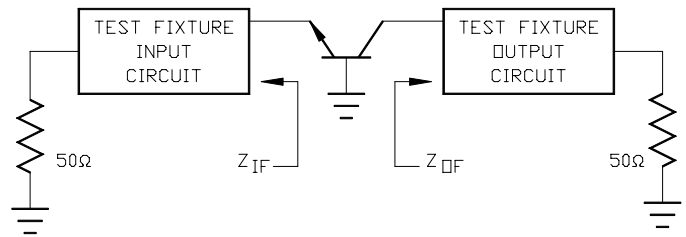
Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CES}	65	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current (Peak)	I_C	27	A
Power Dissipation @ +25°C	P_D	TBD	W
Storage Temperature	T_{STG}	-65 to +200	°C
Junction Temperature	T_J	200	°C

ELECTRICAL CHARACTERISTICS AT 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	BV_{CES}	65	-	V	$I_C=50mA$
Collector-Emitter Leakage Current	I_{CES}	-	15	mA	$V_{CE}=36V$
Thermal Resistance	R_{TH}	-	.25 (TBD)	°C/W	$V_{CC}=36V, P_{in}=24W, F=2.7, 2.8$ and $2.9GHz$
Power Output	P_{out}	170	-	Wpk	$V_{CC}=36V, P_{in}=24W, F=2.7, 2.8$ and $2.9GHz$
Power Gain	G_P	8.5	-	dB	$V_{CC}=36V, P_{in}=24W, F=2.7, 2.8$ and $2.9GHz$
Collector Efficiency	η_C	40	-	%	$V_{CC}=36V, P_{in}=24W, F=2.7, 2.8$ and $2.9GHz$
Input Return Loss	RL	10	-	dB	$V_{CC}=36V, P_{in}=24W, F=2.7, 2.8$ and $2.9GHz$
Load Mismatch Stability	VSWR-S	-	1.5:1	-	$V_{CC}=36V, P_{in}=24W, F=2.7, 2.8$ and $2.9GHz$
Load Mismatch Tolerance	VSWR-T	-	2:1	-	$V_{CC}=36V, P_{in}=24W, F=2.7, 2.8$ and $2.9GHz$

BROADBAND TEST FIXTURE IMPEDANCE

F (MHz)	$Z_{IF} (\Omega)$	$Z_{OF} (\Omega)$
2700	(TBD)	(TBD)
2800	(TBD)	(TBD)
2900	(TBD)	(TBD)



M/A-COM, RF POWER INNOVATIONS • 1742 CRENSHAW BLVD • TORRANCE, CA 90501
(310) 320-6160 • FAX (310) 618-9191