

# Radar Pulsed Power Transistor, 130W, 100 $\mu$ s Pulse, 10% Duty 2.7 - 2.9 GHz

## PH2729-130M

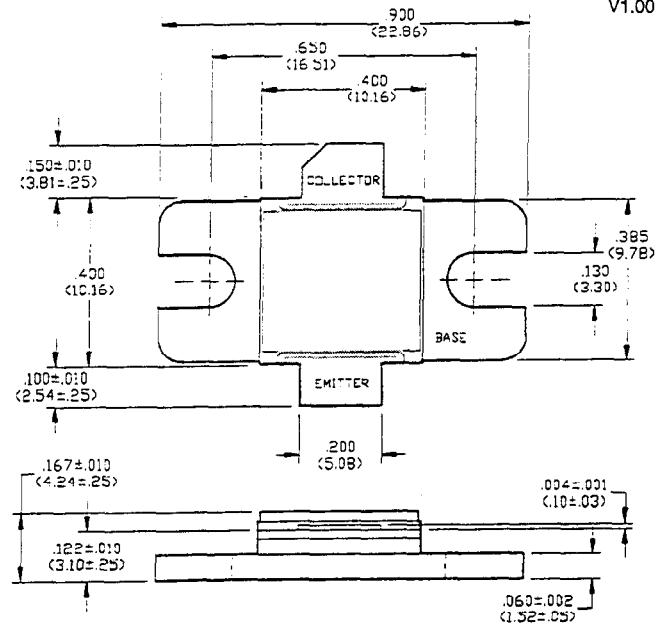
V1.00

### Features

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

### Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	$V_{CES}$	63	V
Emitter-Base Voltage	$V_{EBO}$	3.0	V
Collector Current (Peak)	$I_C$	12.5	A
Total Power Dissipation	$P_{TOT}$	575	W
Junction Temperature	$T_J$	200	°C
Storage Temperature	$T_{STG}$	-65 to +200	°C



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

### Electrical Characteristics at 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	$BV_{CES}$	65	-	V	$I_C=40$ mA
Collector-Emitter Leakage Current	$I_{CES}$	-	7.5	mA	$V_{CE}=36$ V
Thermal Resistance	$R_{TH(JC)}$	-	0.3	°C/W	$V_{CC}=36$ V, $P_{IN}=26$ W, $F=2.7, 2.9$ GHz
Output Power	$P_{OUT}$	130	-	W	$V_{CC}=36$ V, $P_{IN}=26$ W, $F=2.7, 2.9$ GHz
Power Gain	$G_p$	7.0	-	dB	$V_{CC}=36$ V, $P_{IN}=26$ W, $F=2.7, 2.9$ GHz
Collector Efficiency	$\eta_C$	40	-	%	$V_{CC}=36$ V, $P_{IN}=26$ W, $F=2.7, 2.9$ GHz
Input Return Loss	RL	6	-	dB	$V_{CC}=36$ V, $P_{IN}=26$ W, $F=2.7, 2.9$ GHz
Overdrive Stability	OD-S	-	1.0	dB	$V_{CC}=36$ V, $P_{IN}=26$ W, $F=2.7, 2.9$ GHz
Load Mismatch Tolerance	VSWR-T	-	3:1	-	$V_{CC}=36$ V, $P_{IN}=26$ W, $F=2.7, 2.9$ GHz
Load Mismatch Stability	VSWR-S	-	2:1	-	$V_{CC}=36$ V, $P_{IN}=26$ W, $F=2.7, 2.9$ GHz