



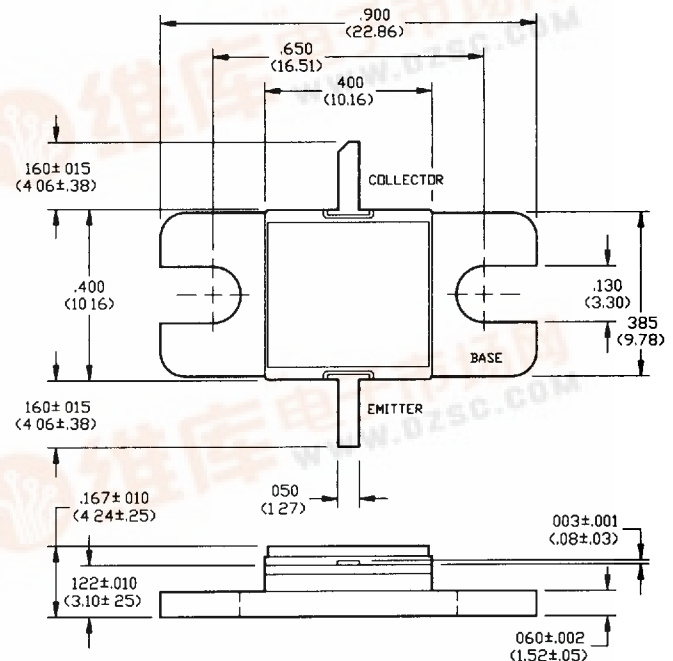
Linear Accelerator Pulsed Power Transistor PH2856-22

22 Watts, 2.856 GHz, 12 μ s Pulse, 10% Duty

Features

- NPN Silicon Microwave Power Transistor
- Common Base Configuration
- 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 $\pm .005$ "
(MILLIMETERS $\pm .13$ MM)

Absolute Maximum Ratings at 25°C

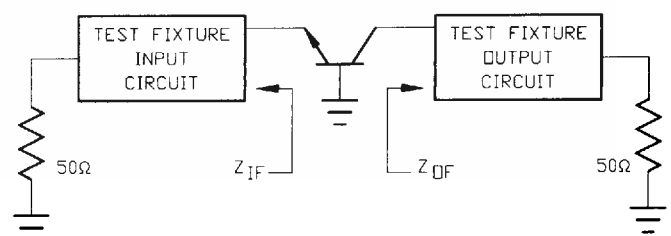
Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CES}	63	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current (Peak)	I_C	2.1	A
Power Dissipation	P_D	109	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-65 to +200	°C

Electrical Characteristics at 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	BV_{CES}	63	-	V	$I_C = 10$ mA
Collector-Emitter Leakage Current	I_{CES}	-	1.5	mA	$V_{CE} = 40$ V
Thermal Resistance	$R_{TH(JC)}$	-	1.60	°C/W	$V_{CC} = 32$ V, $P_{IN} = 3.0$ W, $F = 2.856$ GHz
Output Power	P_{OUT}	22	-	W	$V_{CC} = 32$ V, $P_{IN} = 3.0$ W, $F = 2.856$ GHz
Power Gain	G_P	8.7	-	dB	$V_{CC} = 32$ V, $P_{IN} = 3.0$ W, $F = 2.856$ GHz
Collector Efficiency	η_C	50	-	%	$V_{CC} = 32$ V, $P_{IN} = 3.0$ W, $F = 2.856$ GHz
Input Return Loss	RL	6	-	dB	$V_{CC} = 32$ V, $P_{IN} = 3.0$ W, $F = 2.856$ GHz
Load Mismatch Tolerance	VSWR-T	-	3:1	-	$V_{CC} = 32$ V, $P_{IN} = 3.0$ W, $F = 2.856$ GHz

Test Fixture Impedance

F(GHz)	$Z_{IF}(\Omega)$	$Z_{OF}(\Omega)$
2.856	34 - j17	14 - j8.5



Test Fixture Electrical Schematic

