

1617-35

35 Watts, 28 Volts, Pulsed
Radar 1540 - 1660 MHz

ADVANCED ISSUE

GENERAL DESCRIPTION

The 1617-35 is a high power COMMON BASE bipolar transistor. It is designed for pulsed systems in the frequency band 1540 – 1660 MHz. The transistor includes input and output prematch for broadband performance. The device has gold thin-film metallization and diffused ballasting for proven highest MTTF. Low thermal resistance Solder Sealed Package reduces junction temperature, extends life.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation

Device Dissipation @25°C 290 W

Maximum Voltage and Current

Collector to Base Voltage (BV_{ces}) 50 V

Emitter to Base Voltage (BV_{ebo}) 3.0 V

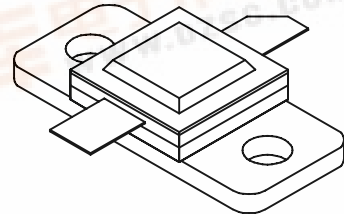
Collector Current (I_c) 6 A

Maximum Temperatures

Storage Temperature -65 to +200 °C

Operating Junction Temperature +200 °C

CASE OUTLINE 55AT



ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Out	$F = 1660 \text{ MHz}$	35			W
P_{in}	Power Input	$V_{cc} = 28 \text{ Volts}$			6	W
P_g	Power Gain	$PW = \text{Note 1}$	7.6			dB
η_c	Collector Efficiency	$DF = \text{Note 1}$		50		%
VSWR	Load Mismatch Tolerance	$F = 1540 \text{ MHz}$			10:1	

FUNCTIONAL CHARACTERISTICS @ 25°C

BV_{ebo}	Emitter to Base Breakdown	$I_e = 20 \text{ mA}$	3.0			V
BV_{ces}	Collector to Emitter Breakdown	$I_c = 60 \text{ mA}$	50			V
h_{FE}	DC – Current Gain	$V_{ce} = 5V, I_c = 500mA$	20			
θ_{jc}^2	Thermal Resistance				0.6	°C/W

NOTE 1: 5 μs at 15% Duty

2. At rated pulse conditions

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