

1617-35 35 Watts, 28 Volts, Pulsed Radar 1540 - 1660 MHz

> CASE OUTLINE 55AT

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 Maximum Voltage and Current	290 W
Collector to Base Voltage (BV_{ces}) Emitter to Base Voltage (BV_{ebo}) Collector Current (I_c)	50 V 3.0 V 6 A
Maximum TemperaturesStorage Temperature-65Operating Junction Temperature	to +200 °C +200 °C

ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	ТҮР	MAX	UNITS
Pout	Power Out	F = 1660 MHz	35			W
P _{in}	Power Input	Vcc = 28 Volts			6	W
Pg	Power Gain	PW = Note 1	7.6			dB
η_{c}	Collector Efficiency	DF = Note 1		50		%
VSWR	Load Mismatch Tolerance	F = 1540 MHz			10:1	

FUNCTIONAL CHARACTERISTICS @ 25°C

BV _{ebo}	Emitter to Base Breakdown	Ie = 20 mA	3.0		V
BV _{ces}	Collector to Emitter Breakdown	Ic = 60 mA	50		V
h _{FE}	DC – Current Gain	Vce = 5V, $Ic = 500mA$	20		
θjc ²	Thermal Resistance			0.6	°C/W

NOTE 1: 5 µs at 15% Duty

2. At rated pulse conditions

Initial Issue May 1999

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