

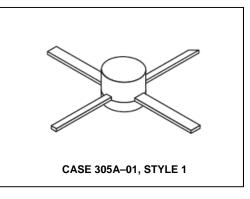


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Designed for wideband amplifier, driver or oscillator applications in military, mobile, and aircraft radio.

- Specified 28 V, 400 MHz characteristics Output power = 1.0 W Power gain = 15 dB min. Efficiency = 45% typ.
- Emitter ballast and low current density for improved MTBF
- Common emitter for improved stability

Product Image



MAXIMUM RATINGS

Rating		Symbol	Value		Unit
Collector–Emitter Voltage		V _{CEO}	30		Vdc
Collector-Base Voltage Emitter-Base Voltage Collector Current — Continuous Total Device Dissipation @ T _C = 25°C Derate above 25°C		V _{CBO}	BO 3.0 C 150		Vdc Vdc mAdc
		V _{EBO}			
		I _C			
		PD			Watts mW/°C
Storage Temperature Range		T _{stg}	-65 to +150		°C
THERMAL CHARACTERISTICS					•
Characteristic		Symbol	Max		Unit
Thermal Resistance, Junction to Case		R _{0JC}	28.5		°C/W
ELECTRICAL CHARACTERISTICS (T _C = 25°C unless otherwi	se noted.)	1			
Characteristic	Symbol	Min	Тур	Max	Unit
DFF CHARACTERISTICS					
	Variana	30	_	_	
Collector–Emitter Breakdown Voltage (I _C = 10 mAdc, I _B = 0)	V _{(BR)CEO}				Vdc
Collector-Emitter Breakdown Voltage ($I_C = 10 \text{ mAdc}, I_B = 0$) Collector-Emitter Breakdown Voltage ($I_C = 5.0 \text{ mAdc}, V_{BE} = 0$)	V(BR)CEO	35	_		Vdc Vdc
		35 35	_		
Collector–Emitter Breakdown Voltage (I _C = 5.0 mAdc, V_{BE} = 0)	V _{(BR)CES}			_ _ _	Vdc

(continued)

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Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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ELECTRICAL CHARACTERISTICS - continued (T_C = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Тур	Мах	Unit
ON CHARACTERISTICS	·		•		
DC Current Gain (I _C = 100 mAdc, V _{CE} = 10 Vdc)	h _{FE}	20	60	150	
DYNAMIC CHARACTERISTICS		•			
Current–Gain — Bandwidth Product (I _C = 100 mAdc, V _{CE} = 20 Vdc, f = 200 MHz)	fT	_	2.5	_	GHz
Output Capacitance (V _{CB} = 28 Vdc, I _E = 0, f = 1.0 MHz)	C _{ob}	_	3.5	5.0	pF
FUNCTIONAL TESTS	•	•	•		
Common–Emitter Amplifier Power Gain (1) (V _{CC} = 28 Vdc, P _{out} = 1.0 W, f = 400 MHz)	G _{pe}	15	16	_	dB
Collector Efficiency (V _{CC} = 28 Vdc, P _{out} = 1.0 W, f = 400 MHz)	η	_	45	_	%
Series Equivalent Input Impedance (V _{CC} = 28 Vdc, P _{out} = 1.0 W, f = 400 MHz)	Z _{in}	_	6.4 – j4.8	_	Ohms
Series Equivalent Output Impedance (V _{CC} = 28 Vdc, P _{out} = 1.0 W, f = 400 MHz)	Z _{out}	-	75 – j45	_	Ohms

NOTE:

1. Class C

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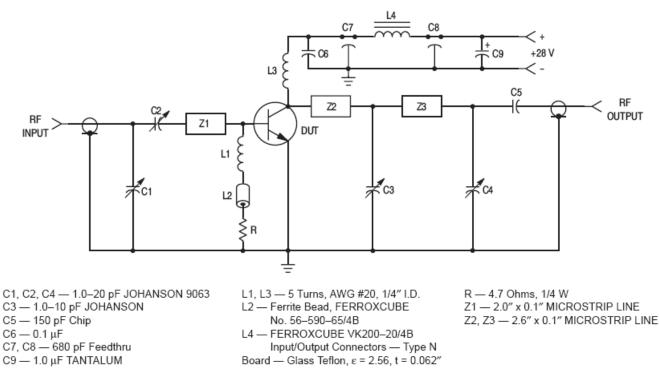


Figure 1. 400 MHz Power Gain Test Circuit

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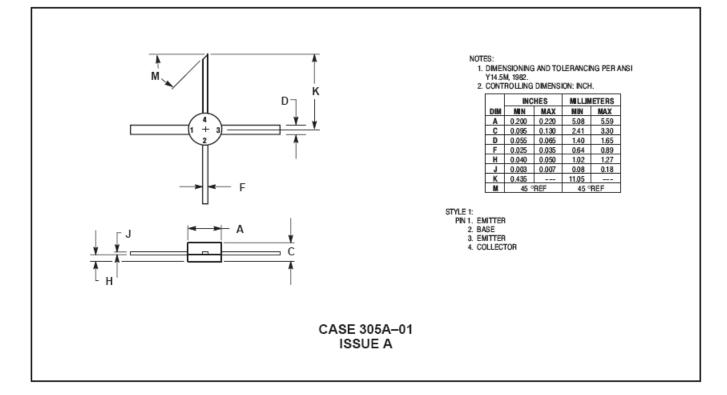
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PACKAGE DIMENSIONS



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