GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

BYI-1/1F/1T/1Z

BYISTORS FOR LINEAR
POWER AMPLIFIERS

GENERAL DESCRIPTION

The BYI-1/1F/1T/1Z is a semiconductor device specifically designed for use in linear amplifier bias circuitry. The byistor acts as a low impedance D.C. bias source which has two modes for thermal compensation.

CASE OUTLINE

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25ºC 11 Watts

Maximum Voltage and Current

BVces	Collector to Emiter Voltage	55 Volts
BVebo	Emitter to Base Voltage	4.0 Volts
Ic	Collector Current	0.7 A

Maximum Temperatures

Storage Temperature	- 65 to +150ºC
Operating Junction Temperature	+150ºC

ELECTRICAL CHARACTERISTICS @ 25 ^{O}C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Output	F = 400 MHz	3			Watts
Pin	Power Input	Vcc = 28 Volts			0.2	Watts
Pg	Power Gain		11.8	13		dB
η**c**	Efficiency			60		%
VSWR	Load Mismatch Tolerance				30:1	

BVebo	Emitter to Base Breakdown	Ie = 5 mA	4.0			Volts
BVces	Collector to Emitter	Ic = 20 mA	55			Volts
BVceo	Breakdown	Ie = 50 mA	30			Volts
BVcbo	Collector to Emitter	Ic = __ mA				Volts
Icbo	Breakdown	Vc = __ Volts				mA
Cob	Collector to Base Breakdown	Vcb = 28 V, F = 1		4.5		pF
$\mathbf{h_{FE}}$	Collector to Base Current	MHz	10	45	150	
θ**jc**	Output Capacitance	Vce = 5 V, Ic = 100 A			16	ºC/W
	DC - Current Gain					
	Thermal Resistance					

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