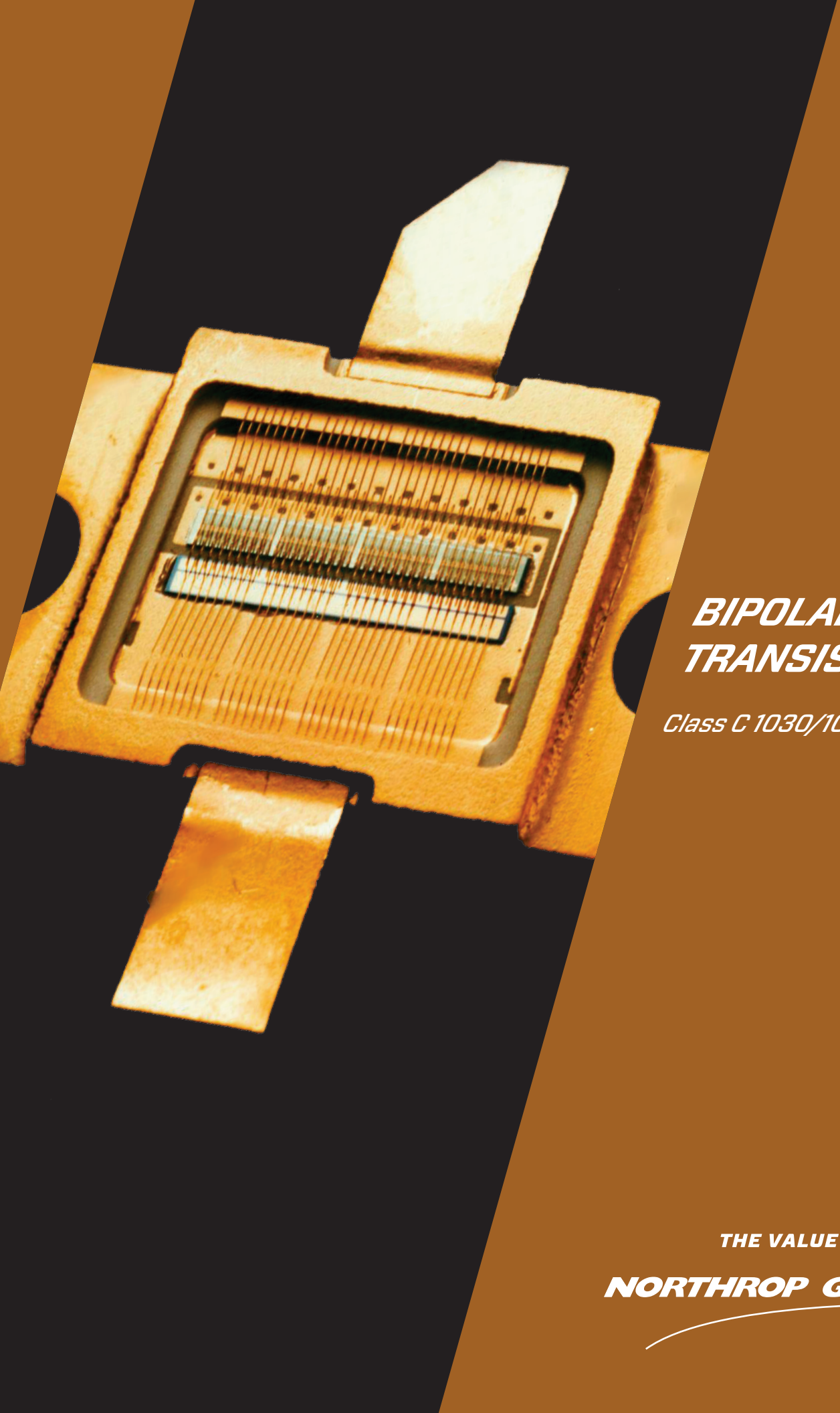


BIPOLAR RF TRANSISTORS

Class C 1030/1090 MHz

THE VALUE OF *PERFORMANCE.*

NORTHROP GRUMMAN

Product Description

The WPTB64A1011Ax is an application specific transistor implemented using Northrop Grumman's Silicon Power Bipolar process and developed for short-pulse, high-power IFF applications. Ballasted emitters in 64 separate base cells on a 3.5 mil thick die help ensure low thermal resistance and good junction temperature uniformity for high reliability. This device is configured for common base operation and is tested at 800 ns pulse width with 1% duty cycle.

Features

- Silicon Technology
- Refractory/Gold Metalization
- Single Stage Internal Matching
- Metal/Ceramic Hermetic Package
- Single Transistor Die Implementation

Absolute Maximum Ratings

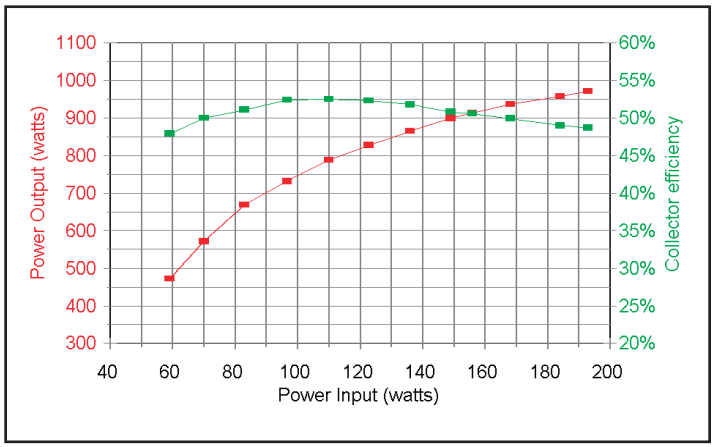
Storage Temperature	-65° to 200° C
Operating Junction Temperature	200° C
Lead Temperature (Soldering 10 sec)	300° C
Collector-Base Voltage	65V
Emitter-Base Voltage	3V
Peak Collector Current	38A
Transient Thermal Resistance	0.06° C/W

Electrical Performance

Characteristic	Symbol	Min	Typical	Max	Units	Test Conditions
Collector Breakdown Voltage	BV_{CES}	65	75		Volts	I = 50 mA
Emitter-Base Breakdown Voltage	BV_{EBO}	3	5		Volts	I = 10 mA
Forward Current Transfer Ratio	h_{FE}	10	50	200		V_{CE} = 5 V, I_C = 500 mA
Common-Base Power Gain	G	6.8	7.2		dB	Note 1
Collector Efficiency	η_C		45		%	Note 1
Rise Time	t_r			90	ns	Note 1
Load Mismatch Tolerance	VSWR	3:1				Note 1
Overdrive Tolerance	OD	2			dB	Note 1

Note 1: V_{CC} = 52 Volts, Pulse Width = 800 ns, Duty = 1%, P_{in} = 160 Watts, f_{test} = 1030 MHz

Typical Transfer Characteristics



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