GHz TECHNOLOGY
RF-MICROWAVE SILICON POWER TRANSISTORS

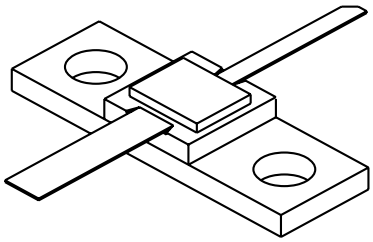
1415-7

7 Watts, 20 Volts, Class C
Microwave 1430 - 1540 MHz

GENERAL DESCRIPTION

The 1415-7 is an internally matched, COMMON BASE transistor capable of providing 7 watts of CW RF Output power across the 1430-1540 MHz band. This transistor is specifically designed for telemetry and telecommunications applications. It utilizes gold metalization and diffused ballasting to provide high reliability and superior ruggedness.

CASE OUTLINE
55LV, STYLE 1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25ºC 21 Watts

Maximum Voltage and Current

BVces	Collector to Emitter Voltage	40 Volts
BVebo	Emitter to Base Voltage	3.5 Volts
Ic	Collector Current	1.2 Amps

Maximum Temperatures

Storage Temperature	- 65 to + 200ºC
Operating Junction Temperature	+ 200ºC

ELECTRICAL CHARACTERISTICS @ 25 ^{O}C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Output	F = 1540 MHz	7			Watt
Pin	Power Input	Vcc = 20Volts			1.4	
Pg	Power Gain		7.0	7.5		dB
ηc	Collector Efficiency			50		%
VSWR	Load Mismatch Tolerance				∞:1	

BVebo	Emitter to Base Breakdown	Ie = 4 mA	3.5			Volts
BVces	Collector to Emitter Breakdown	Ic = 20mA	40			Volts
Icbo	Collector Leakage Current	Vcb = 20 V		1.0		mA
Cob	Output Capacitance	Vcb= 20V, F=1 MHz		8.5		pF
Hfe	DC - Current Gain	Ic = 500 mA, Vce = 5V	20		100	
θjc	Thermal Resistance	TC = 25ºC			8.0	ºC/W

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GHz Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120