

GENERAL DESCRIPTION

The 2023-1.5 is an internally matched common base transistor providing 3 watts of RF CW output power across the 2000-2300 MHz band. This hermetically sealed transistor is specifically designed for telemetry and telecommunications applications.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature 5.8 W

Maximum Voltage and Current

BVces	Collector to Emitter Voltage	45 V
BVebo	Emitter to Base Voltage	3.5 V
Ic	Collector Current	.250 A

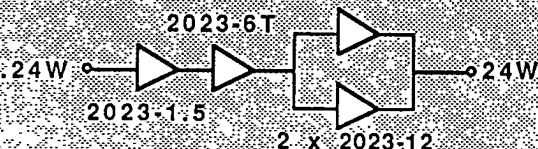
Maximum Temperatures

Storage Temperature	-65 to +200 °C
Operating Junction Temperature	+200 °C

TYPICAL AMPLIFIER LINE UP

Vcc= 24 Volts

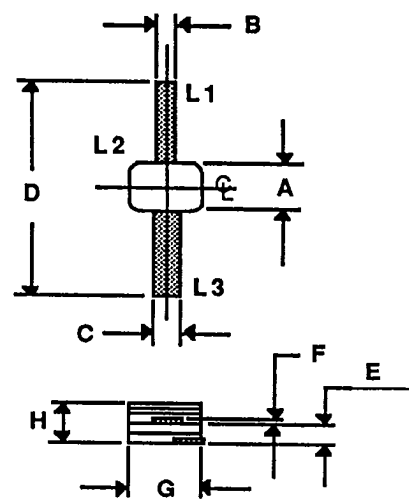
Frequency Range= 2.0-2.3 GHz



2023-1.5

1.5 WATTS - 22 VOLTS
2.0-2.3 GHz

MICROWAVE - BIPOLAR



L1: C
L2: E
L3: B

DIM	Millimeter	TOL	Inches	TOL
A	6.35	.13	.250	.005
B	1.27	.13	.050	.005
C	2.54	.13	.100	.005
D	31.75	.13	1.250	.005
E	1.52	.13	.060	.005
F	0.13	.02	.005	.001
G	6.35	.13	.250	.005
H	2.54	REF	.100	REF

2023-1.5-2

ELECTRICAL CHARACTERISTICS¹

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f = 2.3 GHz V _{cc} = 22V	1.5			Watts
P _{in}	Power Input				0.24	Watts
P _g	Power Gain			8.0		dB
η_c	Collector Efficiency		35			%
VSWR	Load Mismatch Tolerance				$\infty:1$	
BV _{ebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 1mA	3.5			Volts
BV _{ces}	Breakdown Voltage (Collector to Emitter)	V _{be} = 0A, I _c = 10mA	45			Volts
I _{cbo}	Collector Leakage Current	I _e = 0A, V _{cb} = 22V			15	mA
C _{ob}	Capacitance- Collector to Base	f = 1.0MHz, V _{cb} = 22V		3.5		pF
h _{FE}	DC-Current Gain	I _c = 100mA, V _{ce} = 5V	10			
θ_{jc}	Thermal Resistance	T _c = 25° C			30	°C/W

Note 1: T_c = +25°C

SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

403