

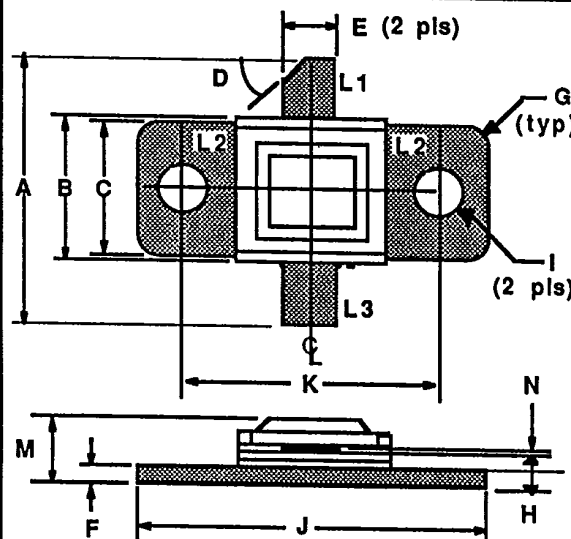
PRELIMINARY INFORMATION

GENERAL DESCRIPTION

The 2023-12 is an internally matched common base transistor providing 12 watts of RF CW output power across the 2000-2300 MHz band. This hermetically sealed transistor is specifically designed for telemetry and telecommunications applications.

2023-12

12 WATT - 24 VOLTS
2.0-2.3 GHz

MICROWAVE BIPOLAR

DIM	Millimeter	TOL	Inches	TOL
A	20.32	.76	.800	.030
B	10.16	.13	.400	.005
C	9.78	.13	.385	.005
D	45°	5°	45°	5°
E	3.81	.13	.150	.005
F	1.52	.13	.060	.005
G	1.52 R	.13	.060 R	.005
H	3.05	.13	.120	.005
I	3.30 DIA	.13	.130 DIA	.005
J	22.86	.13	.900	.005
K	16.51	.13	.650	.005
M	5.46	REF	.215	REF
N	0.13	.02	.005	.001

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature 41 W

Maximum Voltage and Current

BVces Collector to Emitter Voltage 45 V

BVebo Emitter to Base Voltage 3.5 V

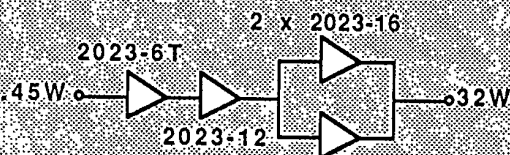
Ic Collector Current 1.8 A

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



2023-12-2

ELECTRICAL CHARACTERISTICS¹

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f = 2.3GHz V _{cc} = 24V	12			Watts
P _{in}	Power Input				2.25	Watts
P _g	Power Gain		7.2			dB
η_c	Collector Efficiency		35			%
VSWR	Load Mismatch Tolerance				3:1	
BV _{ebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 10mA	3.5			Volts
BV _{cbo}	Breakdown Voltage (Collector - Base)	I _e = 0A, I _c = 100mA	45			Volts
I _{cbo}	Collector Leakage Current	I _e = 0A, V _{cb} = 24V		5.0		mA
h_{FE}	DC-Current Gain	I _c = 1.2A, V _{ce} = 5V	20			
θ_{jc}	Thermal Resistance	T _c = +25°C			4.2	°C/W

Note 1: T_c = +25°C

SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE