

GENERAL DESCRIPTION

The 2023-16 is an internally matched common base transistor providing 16 watts of RF CW output power across the 2000-2300 MHz band. This hermetically sealed transistor is specifically designed for telemetry and telecommunications applications.

2023-16

16 WATTS - 24 VOLTS
2.0-2.3 GHz

MICROWAVE - BIPOLAR

ABSOLUTE MAXIMUM RATINGS

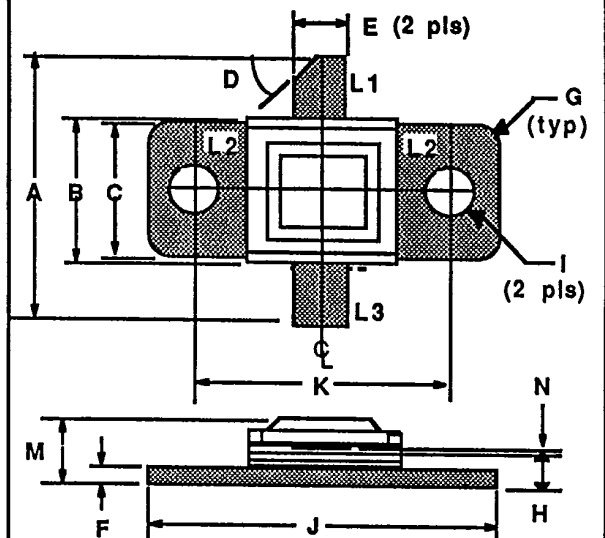
Maximum Power Dissipation @ 25°C Case Temperature 58 W

Maximum Voltage and Current

BVces	Collector to Emitter Voltage	45 V
BVebo	Emitter to Base Voltage	3.5 V
Ic	Collector Current	2.5 A

Maximum Temperatures

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

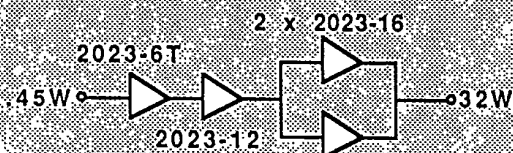


DIM	Millimeter	TOL	Inches	TOL
L1 : C				
L2 : B				
L3 : E				
A	20.32	.76	.800	.030
B	10.16	.13	.400	.005
C	9.78	.13	.385	.005
D	45.0	.50	45.0	.50
E	3.81	.13	.150	.005
F	1.52	.13	.060	.005
G	1.52 R	.13	.060 R	.005
H	3.05	.13	.120	.005
I	3.30 DIA	.13	.130 DIA	.005
J	22.86	.13	.900	.005
K	16.51	.13	.650	.005
M	5.46	REF	.215	REF
N	0.13	.02	.005	.001

TYPICAL AMPLIFIER LINE UP

Vcc = 24 Volts

Frequency Range = 2.0-2.3 GHz



2023-16-2

ELECTRICAL CHARACTERISTICS¹

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f = 2.0-2.3 GHz V _{cc} = 24V	16			Watts
P _{in}	Power Input				3.6	Watts
P _g	Power Gain		6.5			dB
η_c	Collector Efficiency		35			%
VSWR	Load Mismatch Tolerance				3:1	
BV _{ebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 16mA	3.5			Volts
BV _{ces}	Breakdown Voltage (Collector to Emitter)	V _{be} = 0A, I _c = 160mA	45			Volts
I _{cbo}	Collector Leakage Current	I _e = 0A, V _{cb} = 24V			8.0	mA
h _{FE}	DC-Current Gain	V _{ce} = 5.0V, I _c = 1.6A	10			
θ_{jc}	Thermal Resistance	T _c = 50° C			3.0	°C/W

Note 1: T_c = +25°C