



PHT-64023B

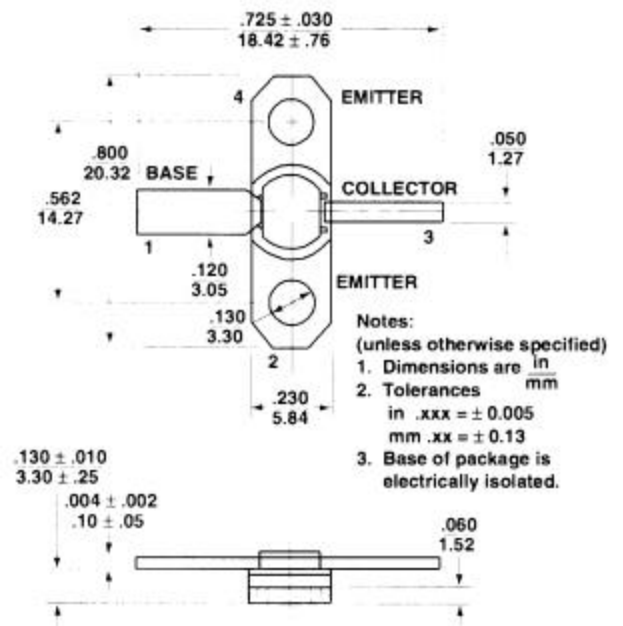
230 mil BeO Package Dimensions

**Up to 4 GHz Linear Power
 Silicon Bipolar Transistor**

Description

The PHT-64023B is a high performance NPN silicon bipolar transistor. The PHT-64023B is housed in a hermetic 230 mil BeO flange package for good thermal characteristics. This device is designed for use in medium power, wide band amplifier and oscillator applications.

VO U is not the original device manufacturer. VO U procures commercial off the shelf product and UpScreens per the following process flow. For custom screening requirements, Quality Conformance Inspection, or additional electrical selection, please contact VO U.



Technical Data

PHT-64023B Suggested Maximum Ratings

Parameter	Suggested Maximum [1]
Emitter-Base Voltage	2.2V
Collector-Base Voltage	40V
Collector-Emitter Voltage	20V
Collector Current	200mA
Junction Temperature	+200°C
Storage Temperature	-65 to +200°C

NOTE:

1. Permanent damage may occur if any of these limits are exceeded

Electrical Specifications			-55°C		+25°C		+150°C	
Symbol	Parameters and Test Conditions	Units	Min	Max	Min	Max	Min	Max
P_{1dB}	Power Output @ 1 dB Gain Compression VCE = 16V, I_c = 110 mA, f = 4.0 GHz	dBm			24.5			
G_{1dB}	1 dB Compression Gain VCE = 16V, I_c = 110 mA, f = 4.0 GHz	dB			6.0			
h_{FE}	Forward Current Transfer Ratio; $V_{CE} = 8$ V, $I_c = 110$ mA	--	15		20	200		
I_{CBO}	Collector Cutoff Current; $V_{CE} = 16$	μ A				100		1000
I_{EBO}	Emitter Cutoff Current; $V_{EB} = 1$ V	μ A				5.0		

TMS UpScreen

Table 1A 100% Screening

Screening Test/Operation	MIL-STD-750 Method	Conditions
Temperature Cycling	1051	Condition C, Ta = -55°C to 175°C 20 cycles minimum
Constant Acceleration	2006	20,000G, Y1 axis only, 1 min. hold does not apply
High Temp. Reverse Bias (HTRB)	1039	Condition A, t= 48 hrs., Ta = +150 °C VCB= 80% of rated BVCBO
Interim Electrical Tests	-----	+25°C; hFE, ICBO IEBO
Power Burn-in	1039	Condition B, t= 160 hrs., Ta = +25°C, Tj = +150°C
Final Electrical Test Group A, Subgroup 2	-----	+25°C; hFE, ICBO IEBO
Delta Limits	-----	$\Delta hFE = \pm 25\%$ $\Delta ICBO = \pm 50$ nA or $\pm 100\%$, whichever is greater
Percent Defective Allowable (PDA)	-----	10% maximum applies to Final Electrical and Deltas
Hermeticity - Fine Leak	1071	Condition H1
- Gross Leak	1071	Condition C or K
External Visual	2071	
Group A Inspection Subgroup 1, Sample 22/0 Subgroup 3, Sample = 116/0 Subgroup 4, Sample = 116/0 Subgroup 5, 6 & 7 are not applicable	-----	Subgroup 1, Visual Mechanical Subgroup 3, hFE @ -55°C, ICBO @ +150°C Subgroup 4, P_{1dB} & G_{1dB} @ +25°C
Marking - Dot units near pin 1		(blue) unless directed otherwise
Shipment Packaging		10 per strip

Marking: Manufacturer's marking (if applicable) will remain on devices. VOUs individual packaging will be labeled with VOUPart Number and manufacturer date code. VOUshipment date code will appear on outer label and C of C. Certificate of Conformance (C of C) will be sent with each shipment. This document provides objective evidence of VOU testing and documents traceability to manufacturers wafer/lot identification.