PHT-41435B

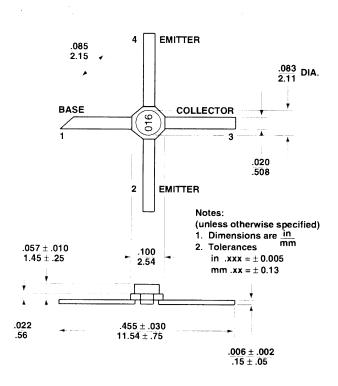
Up to 6 GHz Low Noise Silicon Bipolar Transistor

Description

The PHT-41435B is a general purpose NPN bipolar transistor that offers excellent high frequency performance. The PHT-41435B is housed in a surface mount 100 mil micro-x package. An optimum noise match near 50 $\,\Omega$ at 1 GHz, makes this device easy to use as a low noise amplifier.

TMS is not the original device manufacturer.
TMS 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 TMS.

35 micro-X Package Dimensions



Technical Data

PHT-41435B Suggested Maximum Ratings

Parameter	Suggested Maximum ^[1]			
Emitter-Base Voltage	1.5V			
Collector-Base Voltage	20V			
Collector-Emitter Voltage	12V			
Collector Current	60 mA			
Junction Temperature	+200°C			
Storage Temperature	-65 to +150°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
NFo	Optimum Noise Figure: VCE= 8 V, I _c = 10 mA f=2.0 GHz	dB				2.0		
G _a	Gain @ NFo: VCE = 8 V, $I_c = 10 \text{ mA}$ f = 2.0 GHz	dB			13.0			
$egin{array}{c} egin{array}{c} egin{array}{c} egin{array}{c} egin{array}{c} I_{ ext{CBO}} \end{array} \end{array}$	Forward Current Transfer Ratio; $V_{CE} = 8 \text{ V}$, $I_{C} = 10 \text{mA}$ Collector Cutoff Current; $V_{CE} = 8$ Emitter Cutoff Current; $V_{EB} = 1 \text{ V}$	 μΑ μΑ	15		30	300 0.2 1.0		10

TMS UpScreen

Table 1A 100% Screening

Screening Test/Operation	MIL-STD-750	Conditions				
	Method					
Temperature Cycling	1051	Condition C, $Ta = -55^{\circ}C$ to $150^{\circ}C$				
		20 cycles minimum				
Constant Acceleration	2006	20,000G, Y1 axis only,				
		1 min. hold does not apply				
Power Burn-in	1039	Condition B, $t= 160$ hrs., $Ta = +25$ °C,				
		$Tj = +150^{\circ}C$				
Final Electrical Test		+25°C; hFE, ICBO IEBO				
Group A, Subgroup 2						
Percent Defective Allowable		10% maximum applies to				
(PDA)		Final Electrical and Deltas				
Hermeticity - Fine Leak	1071	Condition H1				
- Gross Leak	1071	Condition C or K				
External Visual	2071					
Group A Inspection						
Subgroup1, Sample 22/0		Subgroup 1, Visual Mechanical				
Subgroup 3, Sample = 116/0		Subgroup 3, hFE @ -55°C, ICBO @ +150°C				
Subgroup 4, Sample = $116/0$		Subgroup 4, NFo & G _a @ +25°C				
Subgroup 5, 6 & 7 are not applicable						
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. TMS individual packaging will be labeled with TMS Part Number and manufacturer date code. TMS shipment 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 TMS testing and documents traceability to manufacturers wafer/lot identification.