

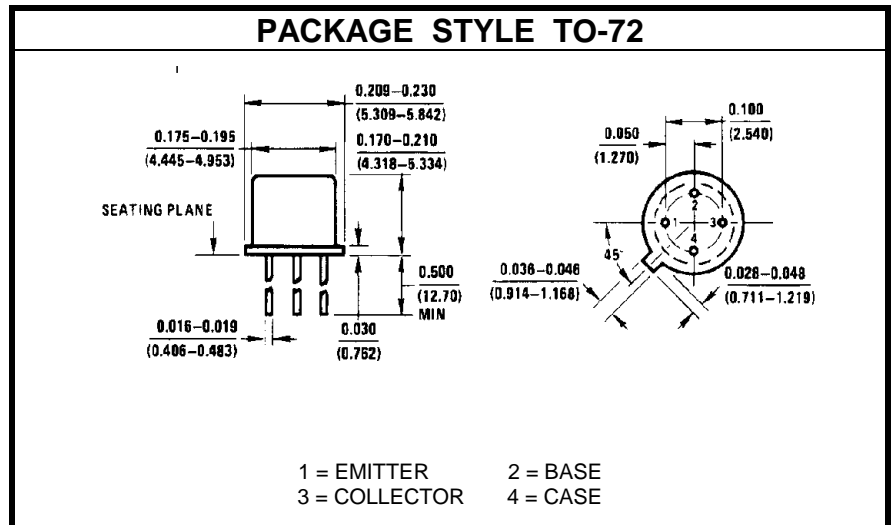
# NPN SILICON HIGH FREQUENCY TRANSISTOR

**DESCRIPTION:**

The **MS175H** is Designed for High Frequency Low Noise Amplifier and Oscillator Applications.

**MAXIMUM RATINGS**

<b>I<sub>C</sub></b>	100 mA (PEAK)
<b>V<sub>CE</sub></b>	15 V
<b>P<sub>DISS</sub></b>	300 mW @ T <sub>C</sub> = 25 °C 200 mW @ T <sub>A</sub> = 25 °C
<b>T<sub>J</sub></b>	-65 °C to +200 °C
<b>T<sub>STG</sub></b>	-65 °C to +200 °C


**CHARACTERISTICS** T<sub>C</sub> = 25 °C

SYMBOL	TEST CONDITIONS		MINIMUM	TYPICAL	MAXIMUM	UNITS
<b>BV<sub>CEO</sub></b>	I <sub>C</sub> = 5.0 mA		15			V
<b>BV<sub>CBO</sub></b>	I <sub>C</sub> = 10 μA		30			V
<b>I<sub>CBO</sub></b>	V <sub>CB</sub> = 20 V T <sub>A</sub> = 150 °C				0.01 1.0	μA
<b>BV<sub>EBO</sub></b>	I <sub>E</sub> = 1.0 μA		2.0			V
<b>h<sub>FE</sub></b>	V <sub>CE</sub> = 1.0 V	I <sub>C</sub> = 5.0 mA	40		150	---
<b>V<sub>CE(SAT)</sub></b>	I <sub>C</sub> = 20 mA	I <sub>B</sub> = 2.0 mA			0.8	V
<b>V<sub>BE(SAT)</sub></b>	I <sub>C</sub> = 20 mA	I <sub>B</sub> = 2.0 mA			1.0	V
<b>f<sub>t</sub></b>	V <sub>CE</sub> = 10 V	I <sub>C</sub> = 5.0 mA	f = 100 MHz	1500		MHz
<b>C<sub>ob</sub></b>	V <sub>CB</sub> = 0 V		f = 1.0 MHz		3.0	pF
	V <sub>CB</sub> = 10 V		f = 1.0 MHz		1.0	pF
<b>C<sub>ib</sub></b>	V <sub>EB</sub> = 0.5 V		f = 1.0 MHz		3.0	pF
<b>NF</b>	V <sub>CE</sub> = 6.0 V	I <sub>C</sub> = 1.5 mA	f = 200 MHz	3.5	4.5	dB
<b>G<sub>pe</sub></b>				15		
<b>P<sub>o</sub></b>	V <sub>CB</sub> = 10 V	I <sub>E</sub> = 12 mA	f = 500 MHz	30		mW
<b>η</b>				25		%