

## MMBTH34 Surface Mount NPN RF-IF Amp

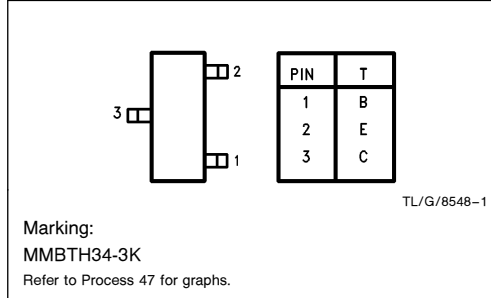
### General Description

This device was designed for common-emitter low noise amplifier and mixer applications in the 100  $\mu\text{A}$  to 15 mA range to 300 MHz, and low frequency drift common-base VHF oscillator applications with high output levels for driving FET mixers.

### Absolute Maximum Ratings

Collector-Base Voltage	45V
Emitter-Base Voltage	4.0V
Collector Current—Continuous	100 mA
Total Device Dissipation, $T_A = 25^\circ\text{C}$	350°C
Derate above 25°C (Note 1)	2.8 mW/°C
Operating Temperature Range	-55°C to +150°C
Storage Temperature Range	-55°C to +150°C
Lead Temperature for 10 seconds	300°C

**Note 1:** Package mounted on 99.5% alumina 10 x 8 x 0.6 mm.

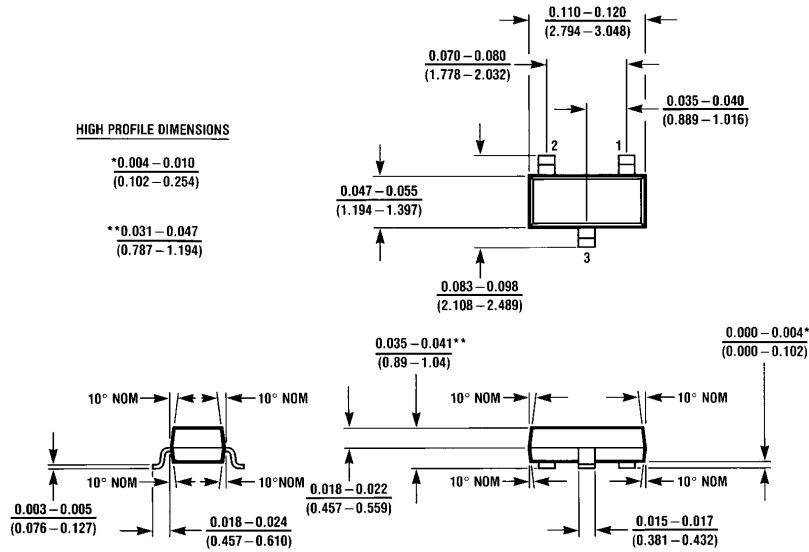


### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

Symbol	Conditions	Min	Typ	Max	Units
$BV_{CBO}$	$I_C = 100 \mu\text{A}$	45			V
$BV_{CEO}$	$I_C = 1.0 \text{ mA}$	45			V
$BV_{EBO}$	$I_E = 10 \mu\text{A}$	4.0			V
$I_{CBO}$	$V_{CB} = 30\text{V}$			50	nA
$I_{CES}$	$V_{CE} = 30\text{V}$			50	nA
$h_{FE}$	$V_{CE} = 15\text{V}, I_C = 7.0 \text{ mA}$	40			
$h_{FE}$	$V_{CE} = 2.0\text{V}, I_C = 20 \text{ mA}$	15			
$V_{CE(s)}$	$I_C = 20 \text{ mA}, I_B = 2.0 \text{ mA}$			0.5	V
$V_{BE(on)}$	$V_{CE} = 15\text{V}, I_C = 7.0 \text{ mA}$			0.95	V
$C_{cb}$	$V_{CB} = 10\text{V}, f = 1 \text{ MHz}$			0.32	pF
$h_{fe}$	$V_{CE} = 15\text{V}, I_C = 15 \text{ mA}, f = 100 \text{ MHz}$	5.0			

Order Number **MMBTH34** or **MMBTH34-HIGH**  
See NS Package Number **M03**

**Physical Dimensions** inches (millimeters)



**SOT-23 3-Lead Molded Dual-In-Line (M)**  
**Order Number MMBTH34 or MMBTH34-HIGH**  
**NS Package Number M03**

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**National Semiconductor Corporation**  
 1111 West Bardin Road  
 Arlington, TX 76017  
 Tel: 1(800) 272-9959  
 Fax: 1(800) 737-7018

**National Semiconductor Europe**  
 Fax: (+49) 0-180-530 85 86  
 Email: cnjwge@tevm2.nsc.com  
 Deutsch Tel: (+49) 0-180-530 85 85  
 English Tel: (+49) 0-180-532 78 32  
 Français Tel: (+49) 0-180-532 93 58  
 Italiano Tel: (+49) 0-180-534 16 80

**National Semiconductor Hong Kong Ltd.**  
 19th Floor, Straight Block,  
 Ocean Centre, 5 Canton Rd.  
 Tsimshatsui, Kowloon  
 Hong Kong  
 Tel: (852) 2737-1600  
 Fax: (852) 2736-9960

**National Semiconductor Japan Ltd.**  
 Tel: 81-043-299-2309  
 Fax: 81-043-299-2408

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