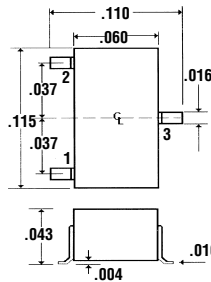
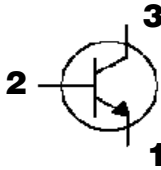
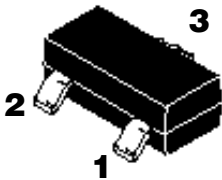




**FMBT4401**

## Description

## Mechanical Dimensions



### Maximum Ratings

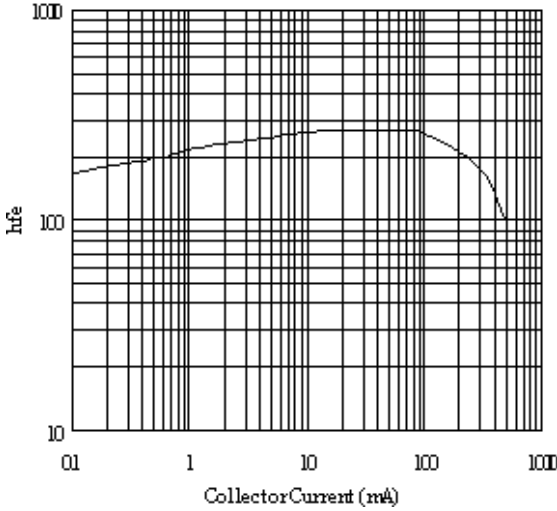
Ratings	Symbol	Value	Units
Collector - Emitter Voltage	$V_{CE0}$	40	V
Collector - Base Voltage	$V_{CB0}$	60	V
Emitter - Base Voltage	$V_{EB0}$	6.0	V
Collector Current (Continuous)	$I_C$	600	mA
Total Device Dissipation FR-5 Board (Note1) $T_A = 25^\circ\text{C}$	$P_D$	350	mW
Junction and Storage Temperature	$T_J, T_{STG}$	-55 to 150	$^\circ\text{C}$

### Electrical Characteristics @ 25°C

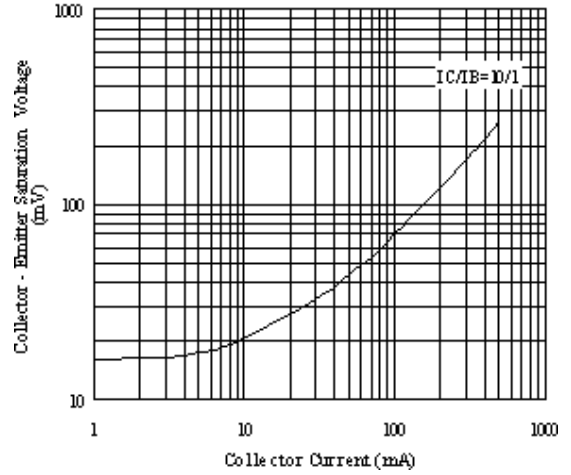
Characteristic	Symbol	Min	Max	Unit
Collector - Emitter Breakdown Voltage ( $I_C = 1.0\text{mA}$ )	$V_{BR(CEO)}$	40	---	V
Collector - Base Breakdown Voltage ( $I_C = 0.1\text{mA}$ )	$V_{BR(CBO)}$	60	---	V
Emitter - Base Breakdown Voltage ( $I_E = 0.01\text{mA}$ )	$V_{BR(EB0)}$	6.0	---	V
Collector Cutoff Current ( $V_{CE} = 35\text{V}, V_{EB} = -0.4\text{V}$ )	$I_{CEX}$	---	0.1	$\mu\text{A}$
DC Current Gain ( $I_C = 0.1\text{mA}, V_{CE} = 1.0\text{V}$ )	$H_{FE}$	20	---	---
( $I_C = 1.0\text{mA}, V_{CE} = 1.0\text{V}$ )		40	---	
( $I_C = 10\text{mA}, V_{CE} = 1.0\text{V}$ )		80	---	
( $I_C = 150\text{mA}, V_{CE} = 1.0\text{V}$ )		100	300	
( $I_C = 500\text{mA}, V_{CE} = 2.0\text{V}$ )		40	---	
Collector - Emitter Saturation Voltage (Note 3) ( $I_C = 150\text{mA}, I_B = 15\text{mA}$ )	$V_{CE(sat)}$	---	0.4	Vdc
( $I_C = 500\text{mA}, I_B = 50\text{mA}$ )		---	0.75	
Base - Emitter Saturation Voltage (Note 3) ( $I_C = 150\text{mA}, I_B = 15\text{mA}$ )	$V_{BE(sat)}$	---	0.95	Vdc
( $I_C = 500\text{mA}, I_B = 50\text{mA}$ )		---	1.2	
Current - Gain - Bandwidth Product ( $I_C = 20\text{mA}, V_{CE} = 10\text{V}, f = 100\text{MHz}$ )	$f_T$	250	---	MHz
Collector-Base Capacitance ( $V_{CB} = 5\text{V}, I_E = 0, f = 1.0\text{MHz}$ )	$C_{cb}$	---	6.5	pF

# FMBT4401 NPN Switching Transistor

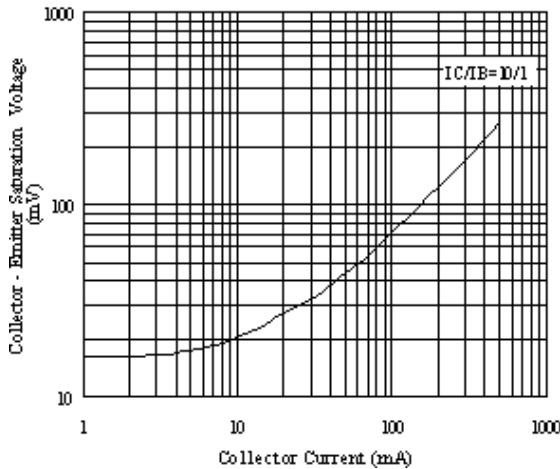
DC CURRENT GAIN



COLLECTOR TO EMITTER SATURATION VOLTAGE



COLLECTOR TO EMITTER SATURATION VOLTAGE



CURRENT GAIN-BANDWIDTH PRODUCT

