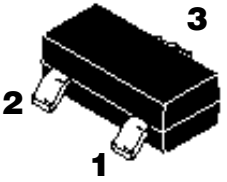
Semiconductor *Data Sheet*

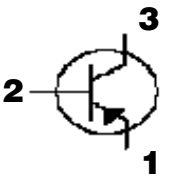
PNP Epitaxial Planar Transistor

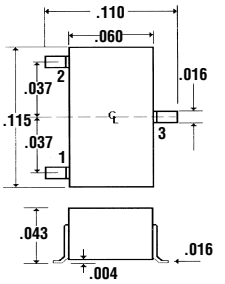
Description

Mechanical Dimensions

FMBT1015







Maximum Ratings

Ratings	Symbol	Value	Units
Collector - Emitter Voltage	V_{CEO}	-50	V
Collector - Base Voltage	V_{CBO}	-50	V
Emitter - Base Voltage	V_{EBO}	-5.0	V
Collector Current (Continuous)	I_C	-150	mA
Total Device Dissipation FR-5 Board (Note1) T_A = 25°C	P_D	125	mW
Junction and Storage Temperature	T_J, T_{STG}	-55 to 150	°C

Electrical Characteristics @ 25°C

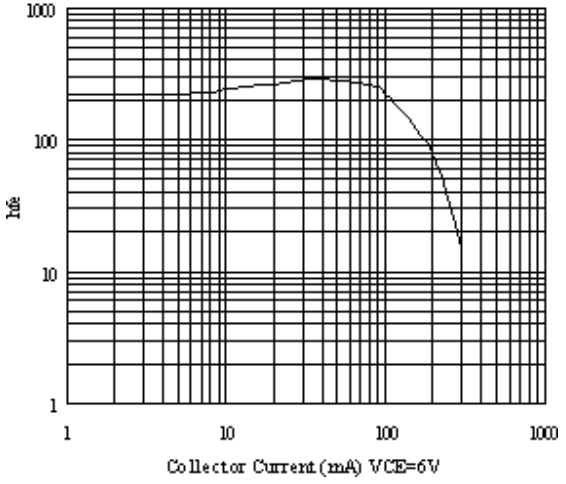
Characteristic	Symbol	Min	Max	Unit
Collector - Emitter Breakdown Voltage (I_C = -1.0mA)	$V_{BR(CEO)}$	-50	---	V
Collector - Base Breakdown Voltage (I_C = -0.1mA)	$V_{BR(CBO)}$	-50	---	V
Emitter - Base Breakdown Voltage (I_E = -0.01mA)	$V_{BR(EBO)}$	-5.0	---	V
Collector Cutoff Current (V_{CB} = -50V)	I_{CBO}	---	-0.1	µA
Emitter Cutoff Current (V_{EB} = -5.0V)	I_{EBO}	---	-0.1	µA
DC Current Gain	H_{FE}			---
(I_C = -2.0 mA, V_{CE} = -6.0 V)*		120	600	
(I_C = -150 mA, V_{CE} = -6.0 V)		25	---	
Collector - Emitter Saturation Voltage (I_C = -100 mA, I_B = -10 mA)	$V_{CE(sat)}$	---	-0.3	Vdc
Base - Emitter Saturation Voltage (I_C = -100 mA, I_B = -10 mA)	$V_{BE(sat)}$	---	-1.1	Vdc
Current - Gain - Bandwidth Product (I_C = -1.0 mA, V_{CE} = -10 V, f = 100 MHz)	f_T	80	---	MHz
Output Capacitance (V_{CB} = -10 V, f = 1.0 MHz)	C_{ob}	---	7.0	pF

*** Classification of h_{FE}**

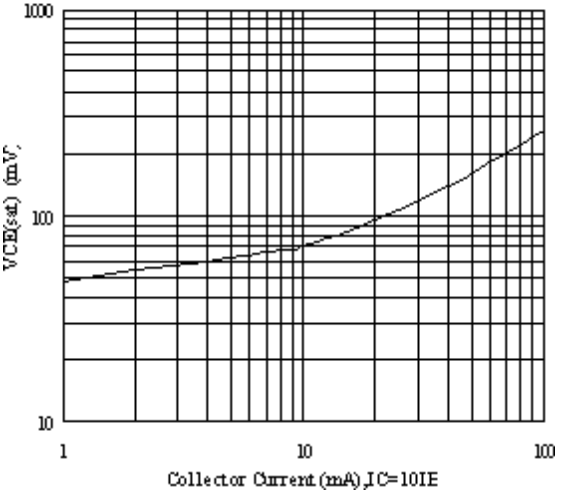
Rank	A4Y	A4G	A4B
Range	120-240	200-400	350-600

FMBT1015 PNP
Epitaxial Planar Transistor

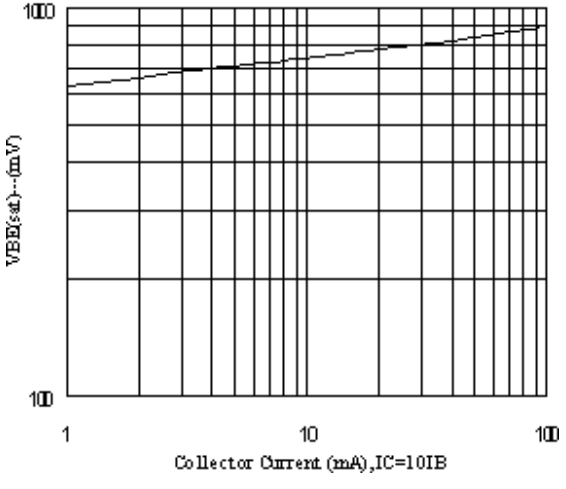
DC CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR-EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



BASE-EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



VBE(ON) VS. IC