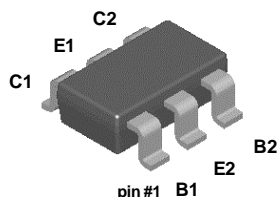


FMB200



SuperSOT™-6

Mark: .N2

Dot denotes pin #1

PNP Multi-Chip General Purpose Amplifier

This device is designed for general purpose amplifier applications at collector currents to 300 mA. Sourced from Process 68.

Absolute Maximum Ratings*

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	45	V
V_{CBO}	Collector-Base Voltage	60	V
V_{EBO}	Emitter-Base Voltage	6.0	V
I_C	Collector Current - Continuous	500	mA
T_J, T_{stg}	Operating and Storage Junction Temperature Range	-55 to +150	$^\circ\text{C}$

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
- 3) All voltages (V) and currents (A) are negative polarity for PNP transistors.

Thermal Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Characteristic	Max	Units
		FMB200	
P_D	Total Device Dissipation	700	mW
	Derate above 25°C	5.6	mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	180	$^\circ\text{C/W}$

PNP Multi-Chip General Purpose Amplifier
(continued)

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
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OFF CHARACTERISTICS

BV _{CBO}	Collector-Base Breakdown Voltage	I _C = 10 µA, I _B = 0	60			V
BV _{CEO}	Collector-Emitter Breakdown Voltage*	I _C = 1.0 mA, I _E = 0	45			V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E = 10 µA, I _C = 0	6.0			V
I _{CBO}	Collector Cutoff Current	V _{CB} = 50 V, I _E = 0			50	nA
I _{CES}	Collector Cutoff Current	V _{CE} = 40 V, I _E = 10			50	nA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 4.0 V, I _C = 0			50	nA

ON CHARACTERISTICS

h _{FE}	DC Current Gain	I _C = 100 µA, V _{CE} = 1.0 V I _C = 10 mA, V _{CE} = 1.0 V I _C = 150 mA, V _{CE} = 5.0 V*	80 100 100		450 350	
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 10 mA, I _B = 1.0 mA I _C = 200 mA, I _B = 20 mA*			0.2 0.4	V V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 10 mA, I _B = 1.0 mA I _C = 200 mA, I _B = 20 mA*			0.85 1.0	V V

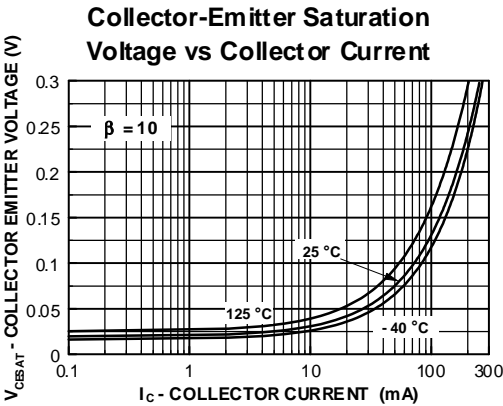
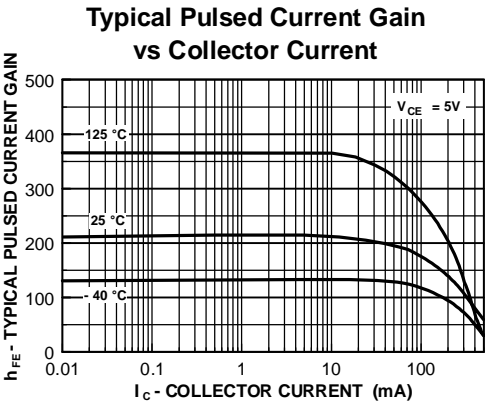
SMALL SIGNAL CHARACTERISTICS

f _T	Current Gain - Bandwidth Product	V _{CE} = 20 V, I _C = 20 mA		300		MHz
C _{obo}	Output Capacitance	V _{CB} = 10 V, f = 1.0 MHz		4.5		pF
NF	Noise Figure	I _C = 100 µA, V _{CE} = 5.0 V, R _G = 2.0 kΩ, f = 1.0 kHz		2.5		dB

*Pulse Test: Pulse Width ≤ 300 µs, Duty Cycle ≤ 2.0%

NOTE: All voltages (V) and currents (A) are negative polarity for PNP transistors.

Typical Characteristics



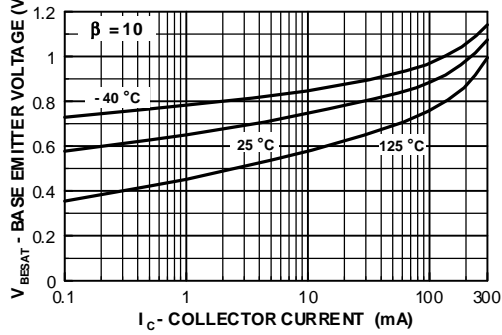
PNP Multi-Chip General Purpose Amplifier

(continued)

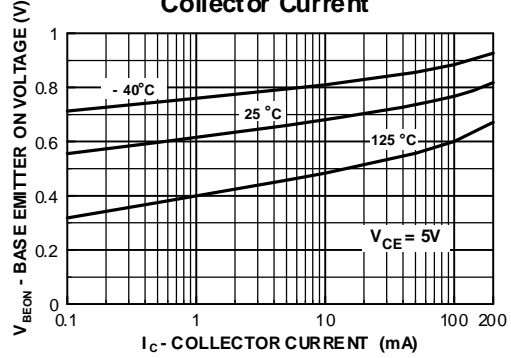
FMB200

Typical Characteristics (continued)

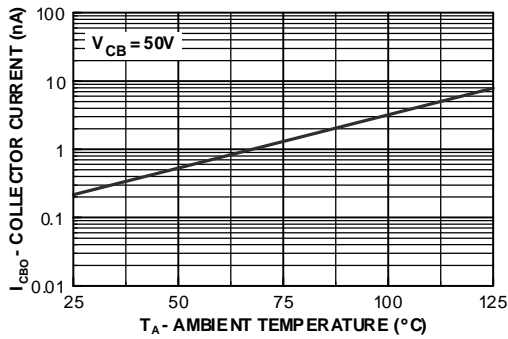
Base-Emitter Saturation Voltage vs Collector Current



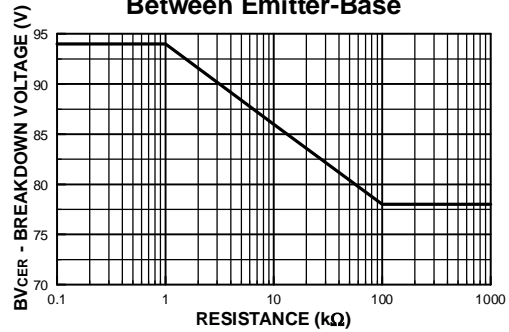
Base Emitter ON Voltage vs Collector Current



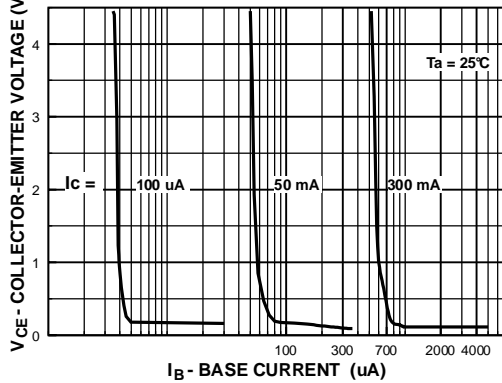
Collector-Cutoff Current vs Ambient Temperature



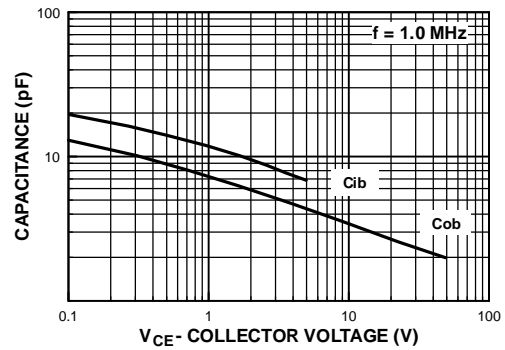
Collector-Emitter Breakdown Voltage with Resistance Between Emitter-Base



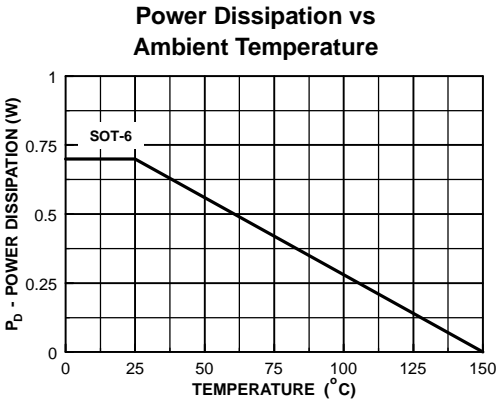
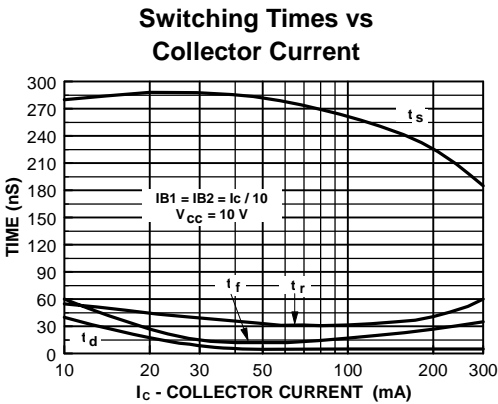
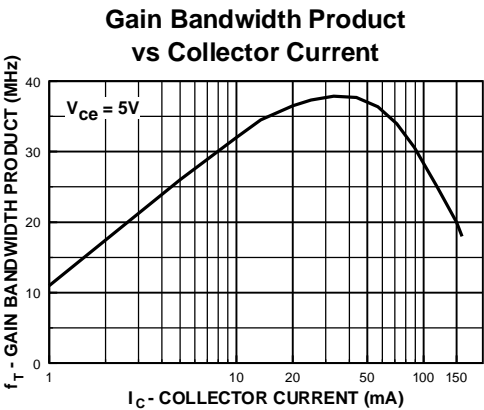
Collector Saturation Region



Input and Output Capacitance vs Reverse Voltage



Typical Characteristics (continued)



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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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