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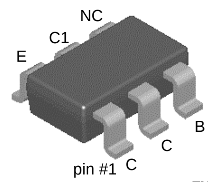
FMBSA56

PNP General Purpose Amplifier

- This device is designed for general purpose amplifier applications at collector currents to 300 mA.
- Sourced from Process 73.



SuperSOT™-6 single
Mark: .2G1

Absolute Maximum Ratings* T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	-80	V
V_{CBO}	Collector-Base Voltage	-80	V
V_{EBO}	Emitter-Base Voltage	-4.0	V
I_C	Collector Current - Continuous	-500	mA
T_J, T_{STG}	Operating and Storage Junction Temperature Range	- 55 ~ 150	°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.

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
Off Characteristics					
$V_{(BR)CEO}$	Collector-Emitter Sustaining Voltage *	I_C = -1.0mA, I_B = 0	-80		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = -100μA, I_E = 0	-80		
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = -100μA, I_C = 0	-4.0		V
I_{CEO}	Collector Cut-off Current	V_{CE} = -60V, I_B = 0		-0.1	μA
I_{CBO}	Collector Cut-off Current	V_{CB} = -80V, I_E = 0		-0.1	μA
On Characteristics					
h_{FE}	DC Current Gain	I_C = -10mA, V_{CE} = -1.0V I_C = -100mA, V_{CE} = -1.0V	100 100		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C = -100mA, I_B = -10mA		-0.25	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C = -100mA, V_{CE} = -1.0V		-1.2	V
Small Signal Characteristics					
f_T	Current Gain Bandwidth Product	I_C = -10mA, V_{CE} = -2.0V, f = 100MHz	50		MHz

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

Thermal Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation *	700	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient, total	180	°C/W

* Device mounted on a 1 in 2 pad of 2 oz copper.

Typical Characteristics

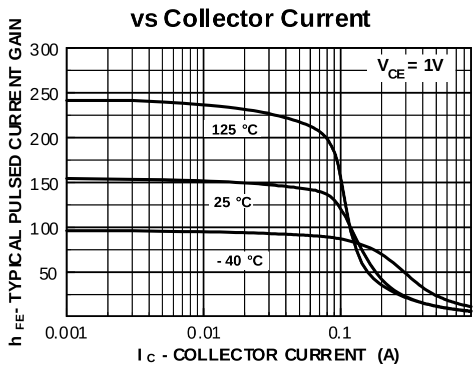


Figure 1. Typical Pulsed Current Gain vs Collector Current

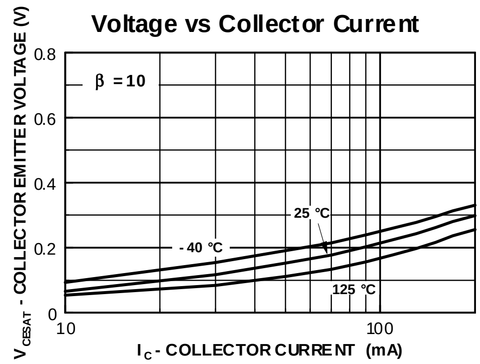


Figure 2. Collector-Emitter Saturation Voltage vs Collector Current

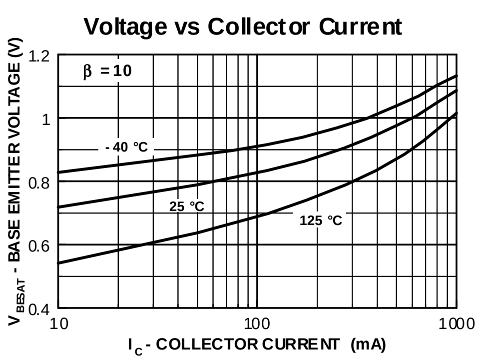


Figure 3. Base-Emitter Saturation Voltage vs Collector Current

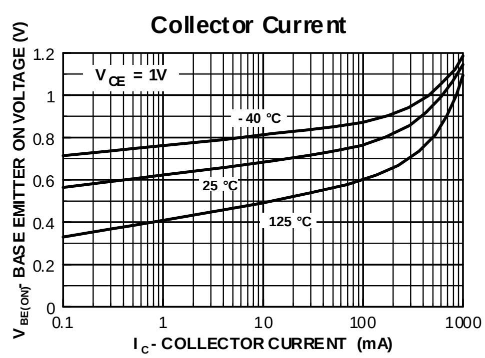


Figure 4. Base-Emitter On Voltage vs Collector Current

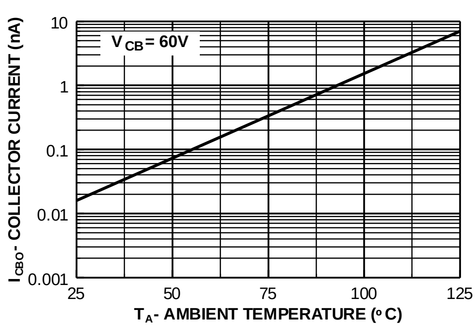


Figure 5. Collector Cutoff Current vs Ambient Temperature

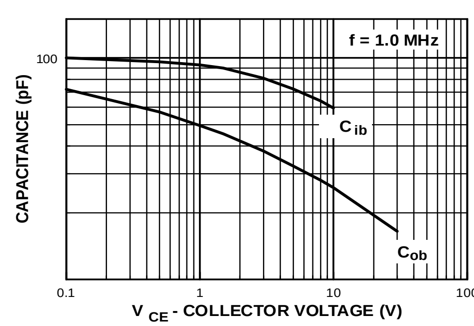


Figure 6. Collector Saturation Region

Typical Characteristics (Continued)

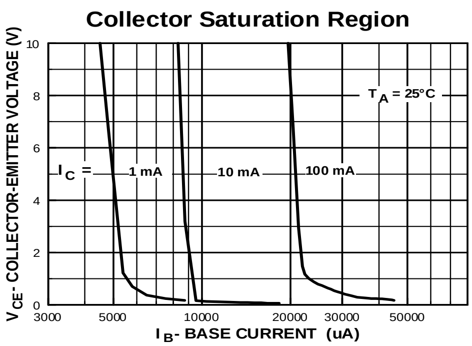


Figure 7. Collector-Emitter Breakdown Voltage with Resistance Between Emitter-Base

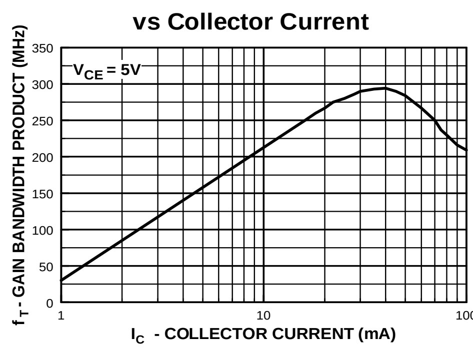
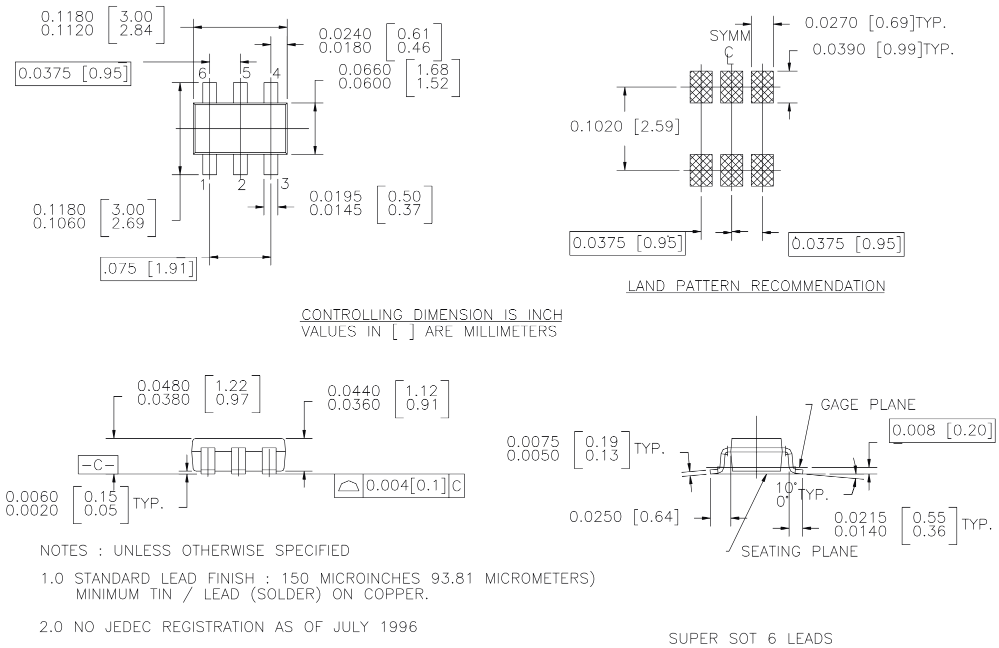


Figure 8. Input and Output Capacitance vs Reverse Voltage

Package Dimensions

SuperSOT™-6



Dimensions in Millimeters

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DOME™	GTO™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	HiSeC™	MSX™	QT Optoelectronics™	TinyLogic®
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EnSigna™	*i-Lo*™	OCX™	RapidConfigure™	TruTranslation™
FACT™	ImpliedDisconnect™	OCXPro™	RapidConnect™	UHC™
FACT Quiet Series™		OPTOLOGIC®	μSerDes™	UltraFET®
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Programmable Active Droop™		POP™	SPM™	

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