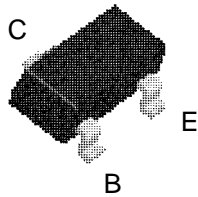


## FSB660 / FSB660A



SuperSOT™-3 (SOT-23)

### PNP Low Saturation Transistor

These devices are designed with high current gain and low saturation voltage with collector currents up to 2A continuous.

#### Absolute Maximum Ratings\* T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Parameter	FSB660/FSB660A	Units
V <sub>CEO</sub>	Collector-Emitter Voltage	60	V
V <sub>CB0</sub>	Collector-Base Voltage	60	V
V <sub>EB0</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current - Continuous	2	A
T <sub>J</sub> , T <sub>stg</sub>	Operating and Storage Junction Temperature Range	-55 to +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°C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

#### Thermal Characteristics T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		FSB660/FSB660A	
P <sub>D</sub>	Total Device Dissipation	500	mW
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	250	°C/W

**PNP Low Saturation Transistor**

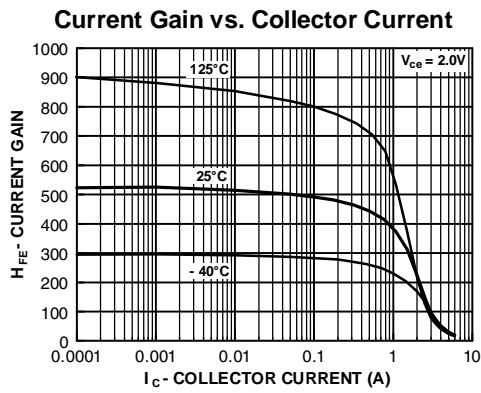
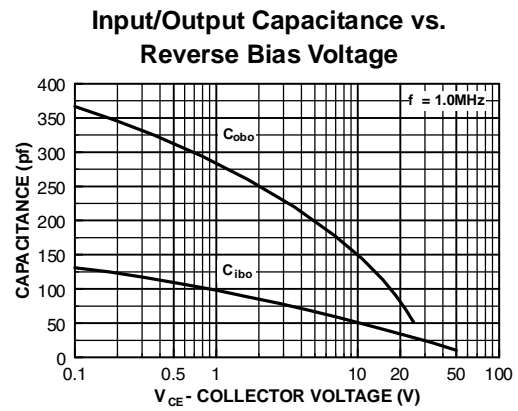
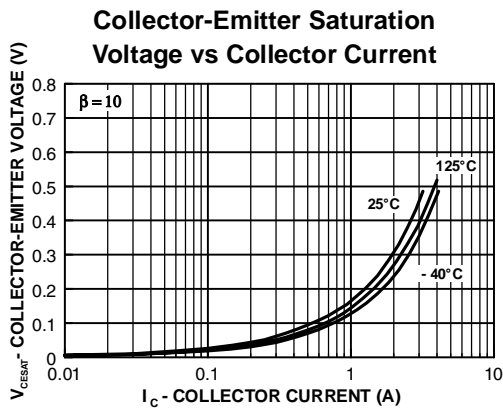
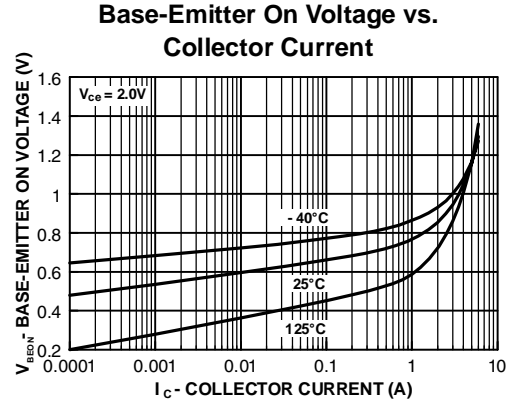
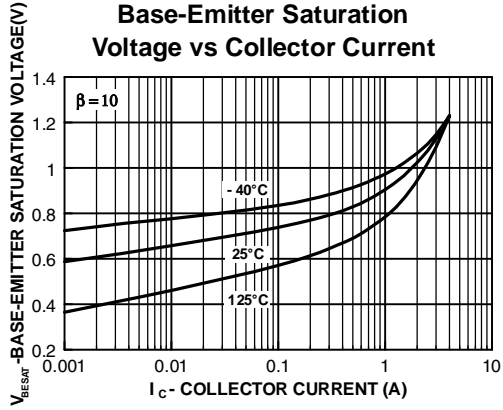
(continued)

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

Symbol	Parameter	Test Conditions	Min	Max	Units
<b>OFF CHARACTERISTICS</b>					
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10 \text{ mA}$	60		V
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = 100 \mu\text{A}$	60		V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = 100 \mu\text{A}$	5		V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = 30 \text{ V}$ $V_{CB} = 30 \text{ V}, T_A = 100^\circ\text{C}$		100 10	nA uA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = 4\text{V}$		100	nA
<b>ON CHARACTERISTICS*</b>					
$h_{FE}$	DC Current Gain	$I_C = 100 \text{ mA}, V_{CE} = 2 \text{ V}$ $I_C = 500 \text{ mA}, V_{CE} = 2 \text{ V}$ <b>FSB660</b> <b>FSB660A</b> $I_C = 1 \text{ A}, V_{CE} = 2 \text{ V}$ $I_C = 2 \text{ A}, V_{CE} = 2 \text{ V}$	70 100 250 80 40	300 550	-
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 1 \text{ A}, I_B = 100 \text{ mA}$ $I_C = 2 \text{ A}, I_B = 200 \text{ mA}$ <b>FSB660</b> <b>FSB660A</b>		300 350 300	mV
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 1 \text{ A}, I_B = 100 \text{ mA}$		1.25	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = 1 \text{ A}, V_{CE} = 2 \text{ V}$		1	V
<b>SMALL SIGNAL CHARACTERISTICS</b>					
$C_{obo}$	Output Capacitance	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		30	pF
$f_T$	Transition Frequency	$I_C = 100 \text{ mA}, V_{CE} = 5 \text{ V}, f = 100 \text{ MHz}$	75		-

\*Pulse Test: Pulse Width  $\leq 300 \mu\text{s}$ , Duty Cycle  $\leq 2.0\%$

## Typical Characteristics



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Rev. H3