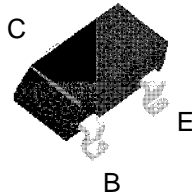


FSB619



SuperSOT™-3 (SOT-23)

NPN Low Saturation Transistor

These devices are designed with high current gain and low saturation voltage with collector currents up to 3A continuous.

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

Symbol	Parameter	FSB619	Units
V _{CEO}	Collector-Emitter Voltage	50	V
V _{CBO}	Collector-Base Voltage	50	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current - Continuous	2	A
T _J , T _{stg}	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_A = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		FSB619	
P _D	Total Device Dissipation* Derate above 25°C	500	mW
		4	
R _{θJA}	Thermal Resistance, Junction to Ambient	250	°C/W

*Device mounted on FR-4 PCB 4.5" X 5"; mounting pad 0.02 in² of 2oz copper.

NPN Low Saturation Transistor

(continued)

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHARACTERISTICS					
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C = 10 mA	50		V
BV _{CBO}	Collector-Base Breakdown Voltage	I _C = 100 μA	50		V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E = 100 μA	5		V
I _{CBO}	Collector Cutoff Current	V _{CB} = 40 V		100	nA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 4V		100	nA
I _{CES}	Collector Emitter Cutoff Current	V _{CES} = 40 V		100	nA
ON CHARACTERISTICS*					
h _{FE}	DC Current Gain	I _C = 10 mA, V _{CE} = 2V I _C = 200 mA, V _{CE} = 2V I _C = 1A, V _{CE} = 2V I _C = 2A, V _{CE} = 2V	200 300 200 100		-
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 100 mA, I _B = 10 mA I _C = 1 A, I _B = 10 mA I _C = 2 A, I _B = 50 mA		20 235 320	mV
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2 A, I _B = 50 mA		1	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 2 A, V _{CE} = 2 V		1	V
SMALL SIGNAL CHARACTERISTICS					
C _{obo}	Output Capacitance	V _{CB} = 10 V, I _E = 0, f = 1MHz		30	pF
f _T	Transition Frequency	I _C = 50 mA, V _{CE} = 10 V, f=100MHz	100		-

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

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