

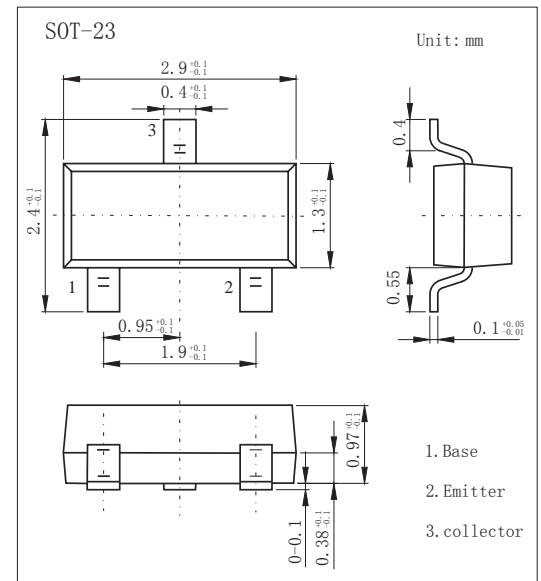
## SOT-23 Plastic-Encapsulate Transistors

### FEATURES

- Epitaxial planar die construction.
- Also available in lead free version.
- High current surface mount PNP silicon switching transistor for load management in portable applications.

### MECHANICAL DATA

- Case style: SOT-23 molded plastic
- Mounting position: any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	UNIT
V <sub>CB0</sub>	collector-base voltage	-50	V
V <sub>CEO</sub>	collector-emitter voltage	-30	V
V <sub>EBO</sub>	emitter-base voltage	-5	V
I <sub>C</sub>	collector current (DC)	-1.0	A
I <sub>CM</sub>	Collector Current-Peak	-2.0	A
P <sub>C</sub>	Collector dissipation	0.31	W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	403	°C/W
T <sub>j</sub> , T <sub>stg</sub>	junction and storage temperature	-55 to +150	°C

Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> = -100μA, I <sub>E</sub> = 0	-50		V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> = -10mA, I <sub>B</sub> = 0	-30		V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> = -100μA, I <sub>C</sub> = 0	-5		V
I <sub>CBO</sub>	Collector cut-off current	I <sub>E</sub> = 0; V <sub>CB</sub> = -30V	-	-0.1	μA
I <sub>CES</sub>	Collector-emitter cutoff current	V <sub>CE</sub> = -30V	-	-0.1	μA
I <sub>EBO</sub>	Emitter cut-off current	I <sub>C</sub> = 0; V <sub>EB</sub> = -4V	-	-0.1	μA
h <sub>FE</sub>	DC current gain	V <sub>CE</sub> = -2V; I <sub>C</sub> = -1mA V <sub>CE</sub> = -2V; I <sub>C</sub> = -500mA V <sub>CE</sub> = -2V; I <sub>C</sub> = -1.0A V <sub>CE</sub> = -2V; I <sub>C</sub> = -2.0A	100 100 80 40	- 300 - -	
V <sub>CE(sat)</sub>	collector-emitter saturation voltage	I <sub>C</sub> = -0.5A; I <sub>B</sub> = -0.05A I <sub>C</sub> = -1.0A; I <sub>B</sub> = -0.1A I <sub>C</sub> = -2.0A; I <sub>B</sub> = -0.2A	- - -	-0.25 -0.30 -0.65	V
V <sub>BE(sat)</sub>	base-emitter saturation voltage	I <sub>C</sub> = -1.0A; I <sub>B</sub> = -0.1A	-	-1.2	V
V <sub>BE(on)</sub>	Base-emitter Turn-on voltage	I <sub>C</sub> = -1.0A, V <sub>CE</sub> = -2.0V	-	-1.1	V
f <sub>T</sub>	transition frequency	I <sub>C</sub> = -100mA; V <sub>CE</sub> = -5V; f = 100MHz	100	-	MHz
C <sub>obo</sub>	Output capacitance	f = 1.0MHz	-	15	pF

# RATINGS AND CHARACTERISTIC CURVES

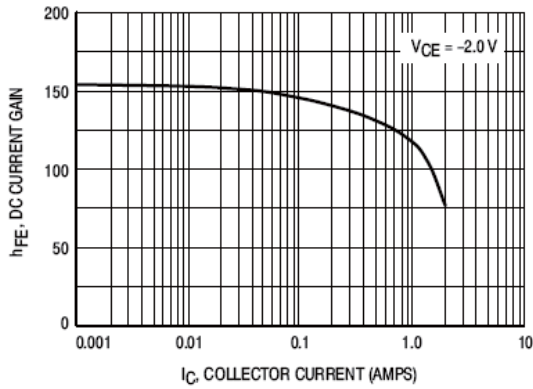


Figure 1. DC Current Gain versus Collector Current

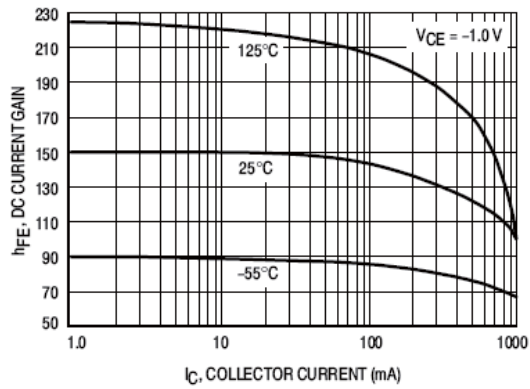


Figure 2. DC Current Gain versus Collector Current

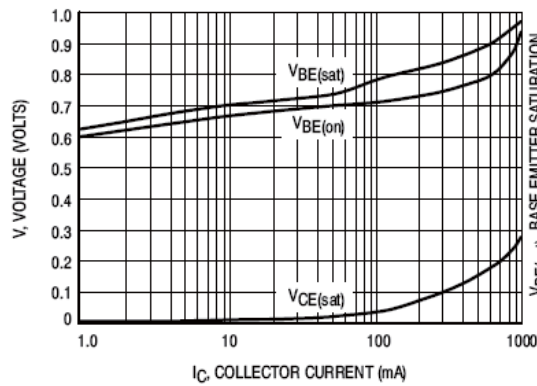


Figure 3. "On" Voltages

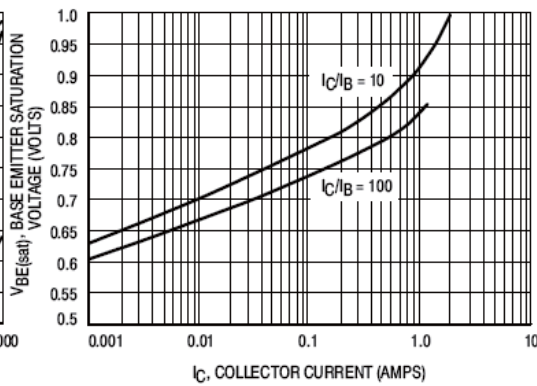


Figure 4. Base Emitter Saturation Voltage versus Collector Current

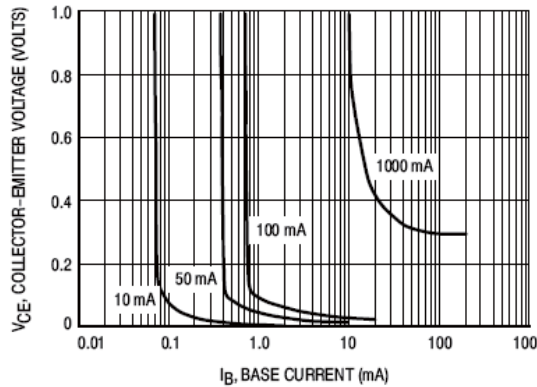


Figure 5. Collector Emitter Saturation Voltage versus Collector Current

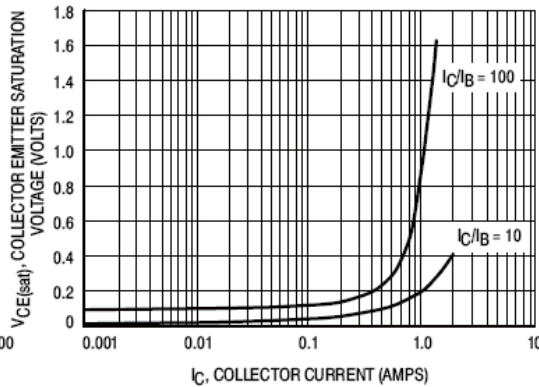


Figure 6. Collector Emitter Saturation Voltage versus Collector Current

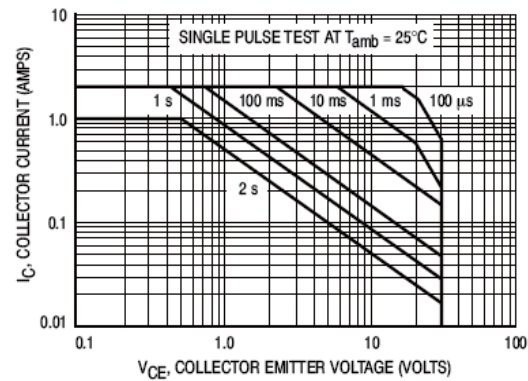


Figure 7. Safe Operating Area