

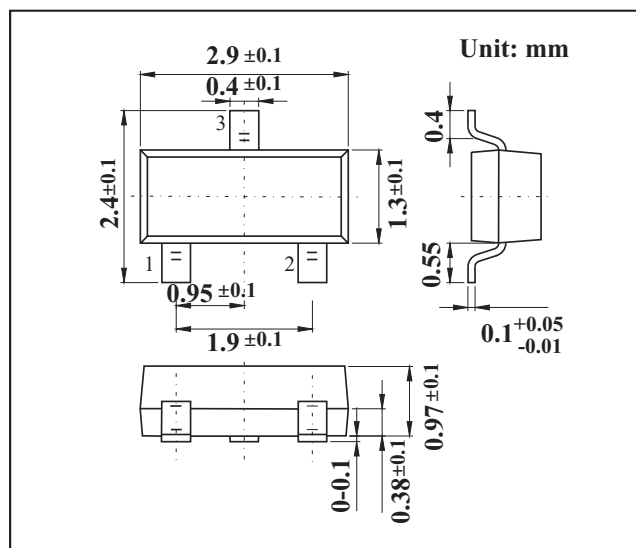
SOT-23 Plastic-Encapsulate Transistors

FEATURES

- TRANSISTOR (NPN)

MECHANICAL DATA

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



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector -Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	5	V
Continuous Collector Current	I_C	0.7	A
Collector Dissipation	P_C	0.15	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	°C/ W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55 ~ +150	°C

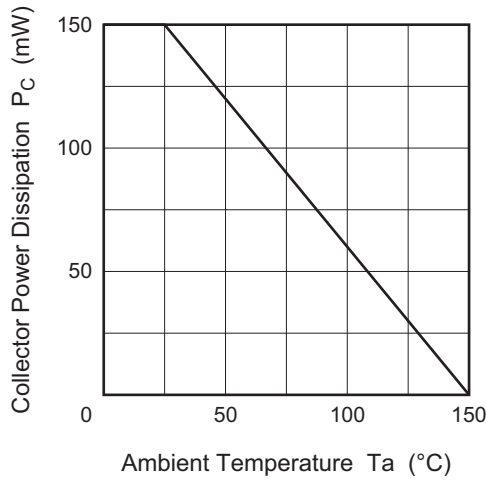
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	15			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20\text{V}, I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			1	μA
DC current gain	h_{FE}^*	$V_{CE}=1\text{V}, I_C=150\text{mA}$	250		800	
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=500\text{mA}, I_B=50\text{mA}$			0.5	V
Base-emitter voltage	V_{BE}^*	$V_{CE}=1\text{V}, I_C=150\text{mA}$			1	V
Transition frequency	f_T^*	$V_{CE}=1\text{V}, f=150\text{MHz}$		250		MHz

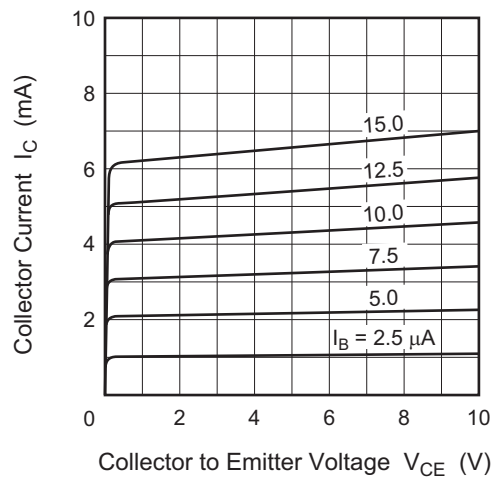
* Pulse test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycles $\leq 2.0\%$

RATINGS AND CHARACTERISTIC CURVES

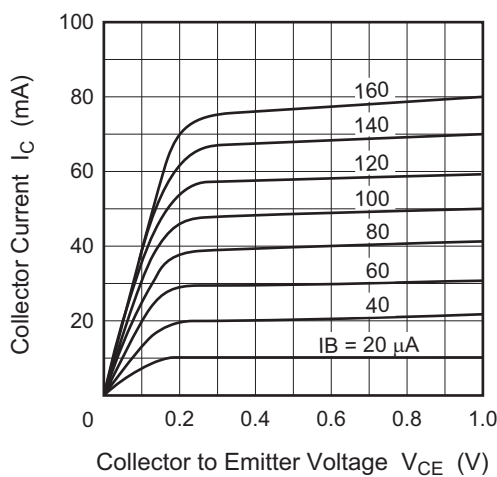
Maximum Collector Dissipation Curve



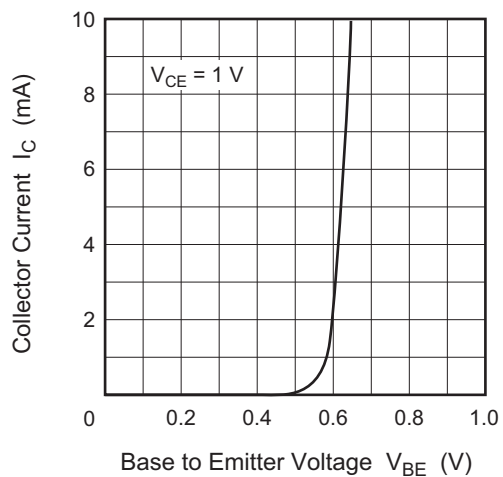
Typical Output Characteristics



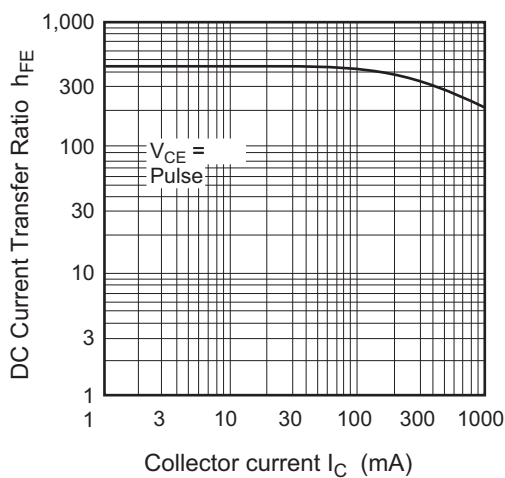
Typical Output Characteristics



Typical Transfer Characteristics



DC Current Transfer Ratio vs. Collector Current



Saturation Voltage vs. Collector Current

