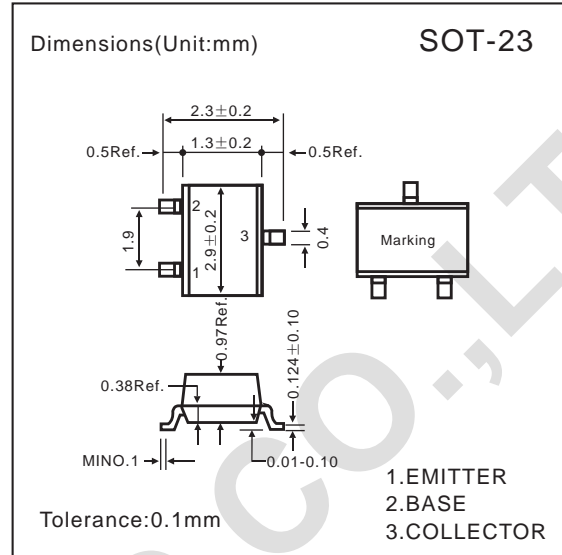


SOT-23 TRANSISTOR

GENERAL PURPOSE TRANSISTOR

- Collector Dissipation: $P_c=225\text{mW}$
- Collector-Emitter Voltage: $V_{CE0}=40\text{V}$
- NPN Epitaxial Silicon Transistor



Absolute Maximum Ratings

($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	60	V
Collector-Emitter Voltage	V_{CE0}	40	V
Emitter-Base Voltage	V_{EB0}	6	V
Collector Current	I_c	200	mA
Collector Dissipation	P_c	225	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-50~150	$^\circ\text{C}$

Electrical Characteristics

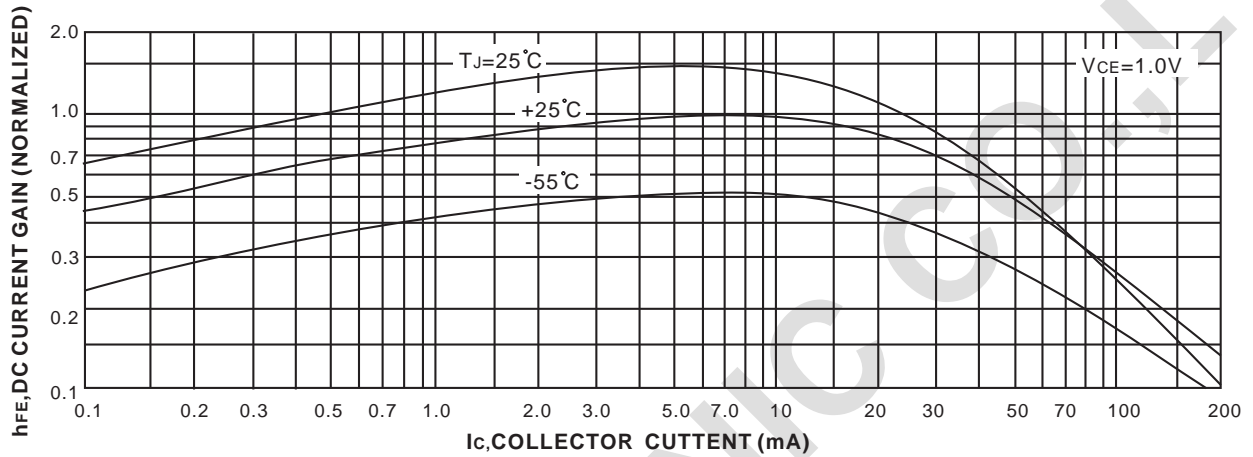
($T_a=25^\circ\text{C}$)

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Condition
Collector-Emitter Breakdown Voltage	BV_{CE0}	40			V	$I_c=1\text{mA}$, $I_B=0$
Collector-Base Breakdown Voltage	BV_{CB0}	60			V	$I_c=10\mu\text{A}$, $I_E=0$
Emitter-Base Breakdown Voltage	BV_{EB0}	6			V	$I_E=10\mu\text{A}$, $I_C=0$
Collector Cut-off Current	I_{CE0}			50	nA	$V_{CB}=30\text{V}$, $V_{EB}=3\text{V}$
Emitter-Base Cutoff Current	I_{EB0}			50	nA	$V_{CB}=3\text{V}$, $I_C=0$
DC Current Gain	h_{FE1}	40				$V_{CE}=1\text{V}$, $I_c=0.1\text{mA}$
DC Current Gain	h_{FE2}	70				$V_{CE}=1\text{V}$, $I_c=1\text{mA}$
DC Current Gain	h_{FE3}	100		300		$V_{CE}=1\text{V}$, $I_c=10\text{mA}$
DC Current Gain	h_{FE4}	60				$V_{CE}=1\text{V}$, $I_c=50\text{mA}$
DC Current Gain	h_{FE5}	30				$V_{CE}=1\text{V}$, $I_c=100\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.2	V	$I_c=10\text{mA}$, $I_B=1\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.3	V	$I_c=50\text{mA}$, $I_B=5\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	0.65		0.85	V	$I_c=10\text{mA}$, $I_B=1\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			0.95	V	$I_c=50\text{mA}$, $I_B=5\text{mA}$
Output Capacitance	C_{ob}			4	PF	$V_{CE}=5\text{V}$, $I_c=0$, $f=1\text{MHz}$
Current Gain-Bandwidth Product	f_T	300			MHz	$V_{CE}=20\text{V}$, $I_c=10\text{mA}$, $f=100\text{MHz}$

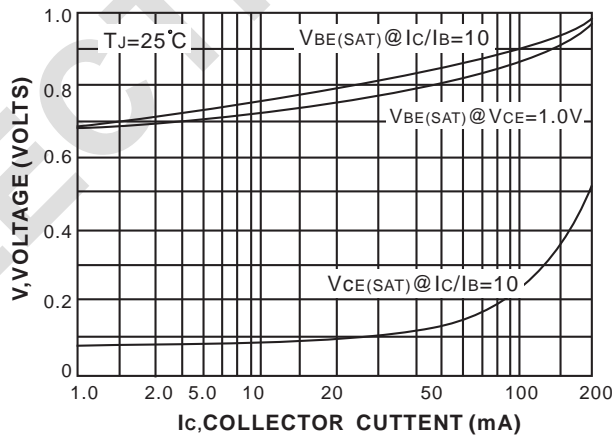
Total Device Dissipation:FR=1X0.75X0.062 in Board Derate 25°C

Pulse Test: Pulse Width 300uS Duty cycle 2%

Typical Characteristics



DC Current Gain



"On" Voltages