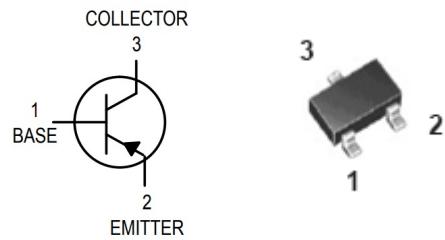


**PNP Silicon Epitaxial Planar Transistors**

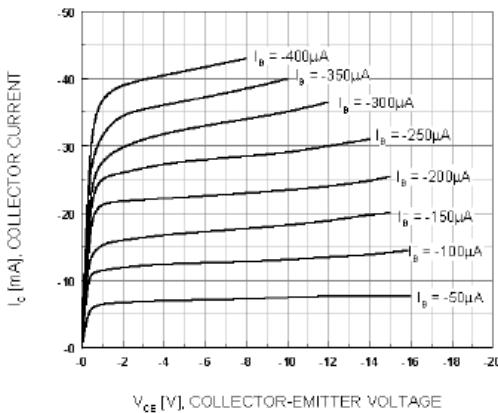
for switching and AF amplifier applications


**Marking: 2Q**
**SOT-23**
**Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )**

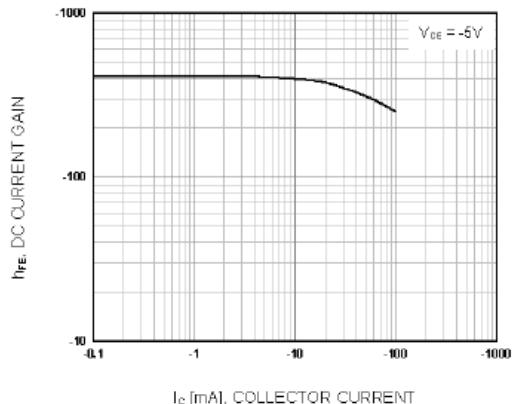
Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	50	V
Collector Emitter Voltage	$-V_{CEO}$	45	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	50	mA
Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

**Characteristics at  $T_a = 25^\circ\text{C}$** 

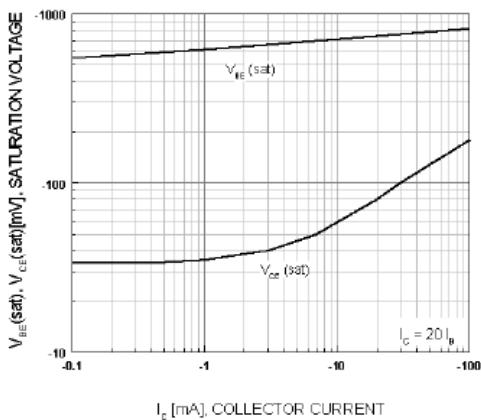
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE} = 5 \text{ V}$ , $-I_C = 1 \text{ mA}$	$h_{FE}$	150	400	-
Collector Base Cutoff Current at $-V_{CB} = 50 \text{ V}$	$-I_{CBO}$	-	50	nA
Emitter Base Cutoff Current at $-V_{EB} = 5 \text{ V}$	$-I_{EBO}$	-	50	nA
Collector Base Breakdown Voltage at $-I_C = 100 \mu\text{A}$	$-V_{(BR)CBO}$	50	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1 \text{ mA}$	$-V_{(BR)CEO}$	45	-	V
Emitter Base Breakdown Voltage at $-I_E = 100 \mu\text{A}$	$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage at $-I_C = 100 \text{ mA}$ , $-I_B = 5 \text{ mA}$	$-V_{CE(sat)}$	-	0.65	V
Base Emitter Saturation Voltage at $-I_C = 100 \text{ mA}$ , $-I_B = 5 \text{ mA}$	$-V_{BE(sat)}$	-	1	V
Gain Bandwidth Product at $-V_{CE} = 5 \text{ V}$ , $-I_C = 10 \text{ mA}$	$f_T$	100	-	MHz
Output Capacitance at $-V_{CB} = 10 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{OB}$	-	7	pF
Noise Figure at $-V_{CE} = 5 \text{ V}$ , $-I_C = 200 \mu\text{A}$ , $f = 1 \text{ KHz}$ , $R_G = 2 \text{ K}\Omega$	NF	-	10	dB



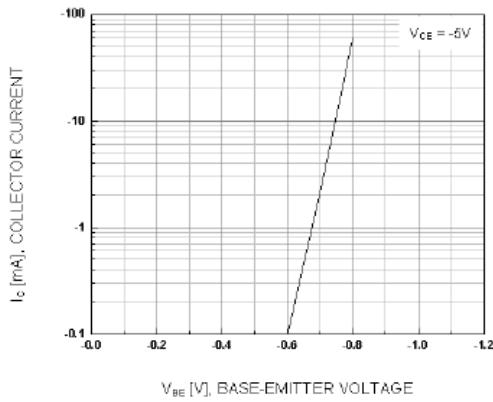
**Figure 1. Static Characteristic**



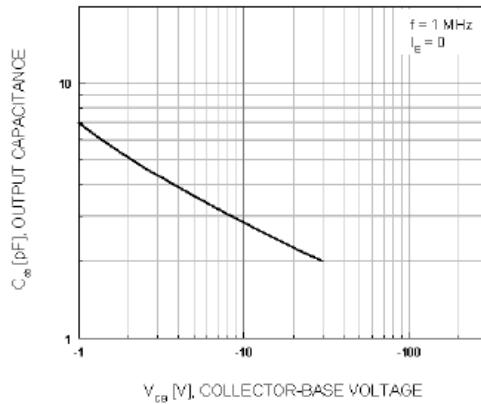
**Figure 2. DC current Gain**



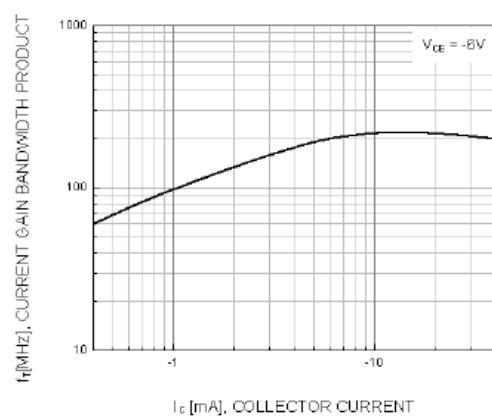
**Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage**



**Figure 4. Base-Emitter On Voltage**



**Figure 5. Collector Output Capacitance**



**Figure 6. Current Gian Bandwidth Product**

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