

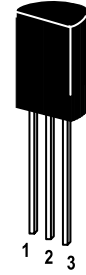
# ST 8050 (1.5A)

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## NPN Silicon Epitaxial Planar Transistor

for switching and amplifier applications.  
Especially suitable for AF-driver stages  
and low power output stages.

On special request, these transistors can be  
manufactured in different pin configurations.



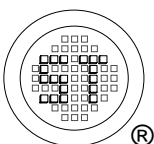
1. Emitter 2. Base 3. Collector  
TO-92 Plastic Package  
Weight approx. 0.19g

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	40	V
Collector Emitter Voltage	$V_{CEO}$	25	V
Emitter Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	1.5	A
Power Dissipation	$P_{tot}$	1	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain					
at $V_{CE} = 1\text{ V}$ , $I_C = 5\text{ mA}$	$h_{FE}$	45	-	-	-
at $V_{CE} = 1\text{ V}$ , $I_C = 100\text{ mA}$	8050C $h_{FE}$	120	-	200	-
	8050D $h_{FE}$	160	-	300	-
at $V_{CE} = 1\text{ V}$ , $I_C = 800\text{ mA}$	$h_{FE}$	40	-	-	-
Collector Cutoff Current					
at $V_{CB} = 35\text{ V}$	$I_{CBO}$	-	-	100	nA
Emitter Cutoff Current					
at $V_{BE} = 6\text{ V}$	$I_{EBO}$	-	-	100	nA
Collector Base Breakdown Voltage					
at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	40	-	-	V
Collector Emitter Breakdown Voltage					
at $I_C = 2\text{ mA}$	$V_{(BR)CEO}$	25	-	-	V
Emitter Base Breakdown Voltage					
at $I_E = 100\text{ }\mu\text{A}$	$V_{(BR)EBO}$	6	-	-	V
Collector Emitter Saturation Voltage					
at $I_C = 800\text{ mA}$ , $I_B = 80\text{ mA}$	$V_{CE(sat)}$	-	-	0.5	V
Base Emitter Saturation Voltage					
at $I_C = 800\text{ mA}$ , $I_B = 80\text{ mA}$	$V_{BE(sat)}$	-	-	1.2	V
Base Emitter Voltage					
at $I_C = 10\text{ mA}$ , $V_{CE} = 1\text{ V}$	$V_{BE}$	-	-	1	V
Gain Bandwidth Product					
at $V_{CE} = 10\text{ V}$ , $I_C = 50\text{ mA}$	$f_T$	120	-	-	MHz
Collector Base Capacitance					
at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{OB}$	-	15	-	pF



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company  
listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001 : 2004  
Certificate No. 71110



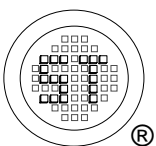
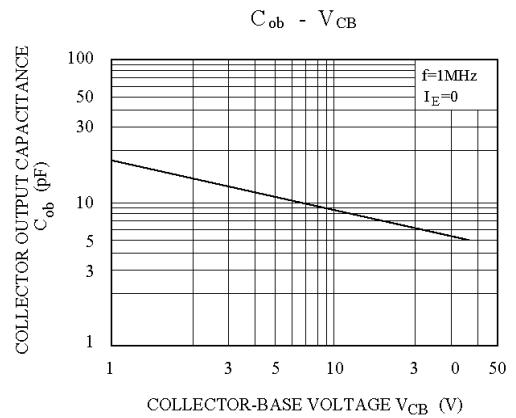
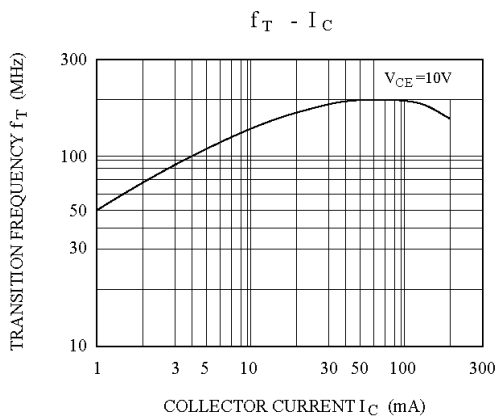
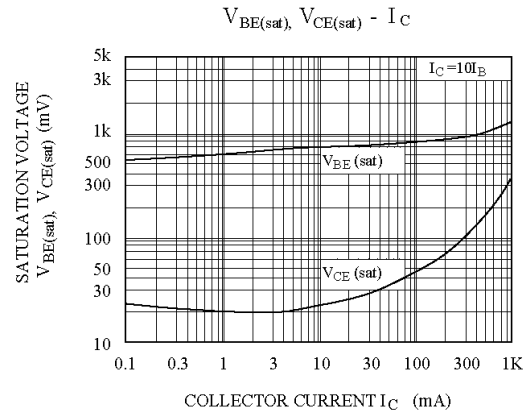
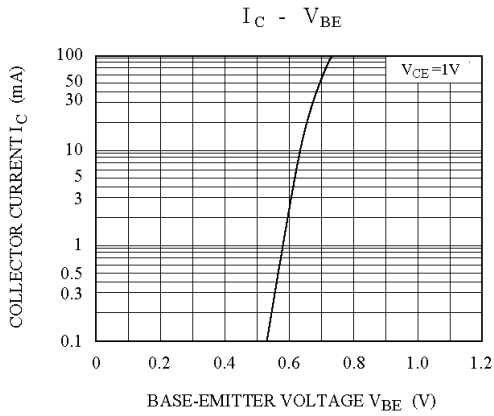
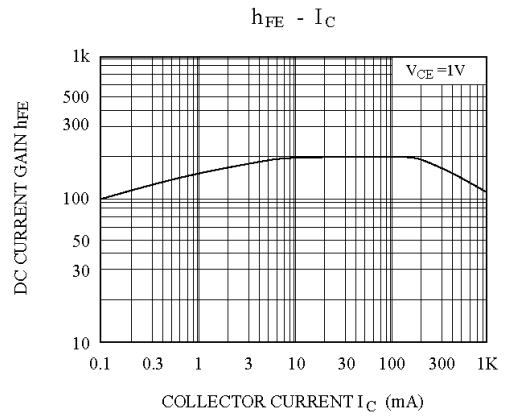
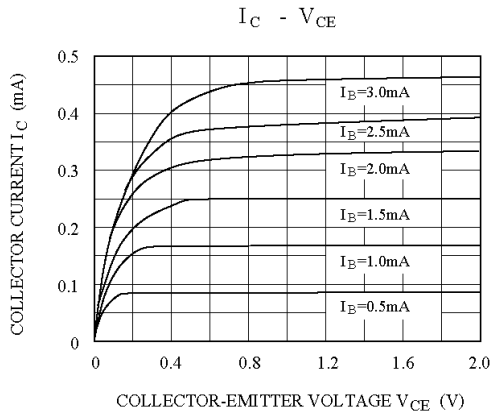
ISO 9001:2000  
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