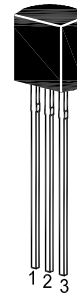


ST 2SC401

NPN Silicon Epitaxial Planar Transistor

for low saturation switching and voltage regulator applications.



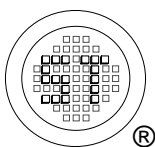
1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	80	V
Collector Emitter Voltage	V_{CEO}	60	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Power Dissipation	P_{tot}	625	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 2\text{ V}$, $I_C = 100\text{ mA}$ at $V_{CE} = 2\text{ V}$, $I_C = 1\text{ A}$	h_{FE}	200	-	400	-
	h_{FE}	80	-	-	-
Collector Base Cutoff Current at $V_{CB} = 60\text{ V}$	I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	-	100	nA
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	60	-	-	V
Collector Emitter Saturation Voltage at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	$V_{CE(sat)}$	-	-	0.4	V
Base Emitter on Voltage at $V_{CE} = 2\text{ V}$, $I_C = 500\text{ mA}$	$V_{BE(on)}$	-	-	1.2	V
Gain Bandwidth Product at $V_{CB} = 10\text{ V}$, $I_C = 50\text{ mA}$	f_T	-	160	-	MHz
Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	10	-	pF



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Fig. 1 $P_C - T_a$

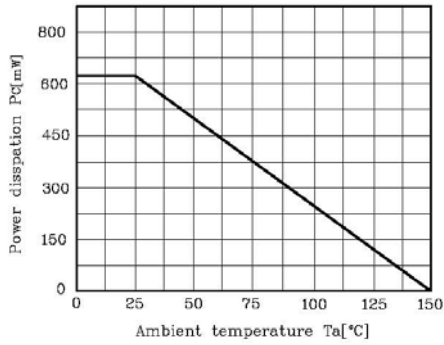


Fig. 2 $V_{CE} - I_C$

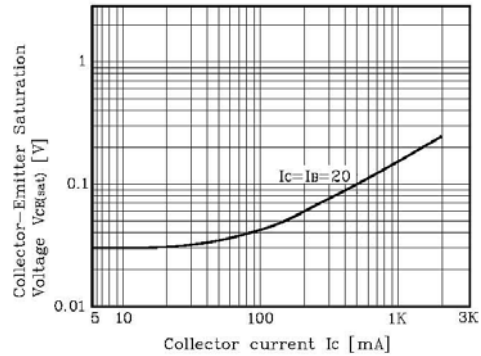


Fig. 3 $h_{FE} - I_C$

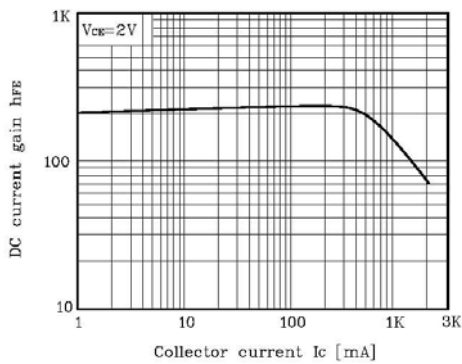


Fig. 4 $C_{ob} - V_{CB}$

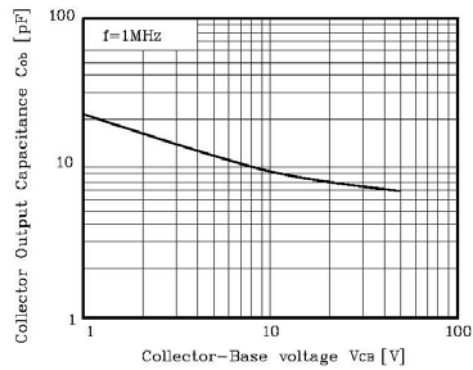


Fig. 5 $I_C - V_{CE}$

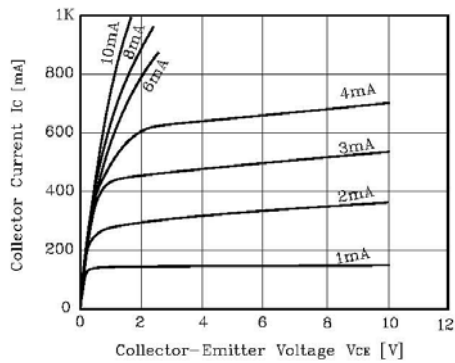


Fig. 6 $I_C - V_{CE}$

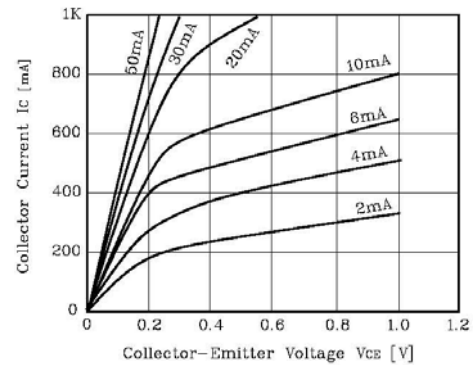


Fig. 7 $f_T - I_C$

