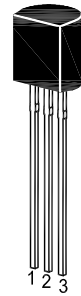


# 2SC401

## 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

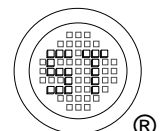


Fig. 1  $P_C - T_a$

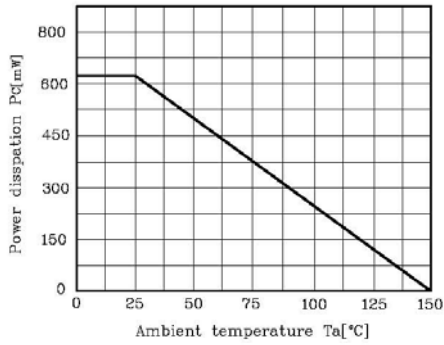


Fig. 2  $V_{CE} - I_C$

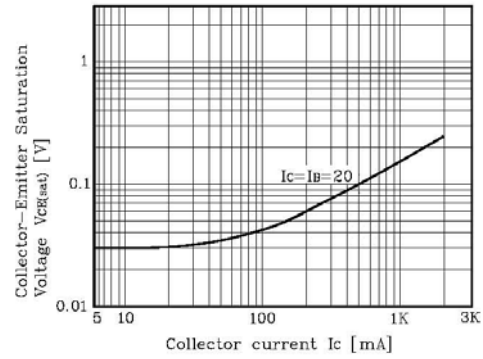


Fig. 3  $h_{FE} - I_C$

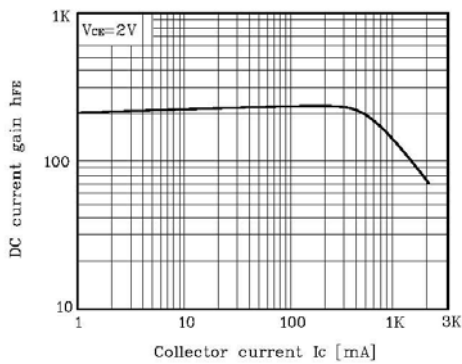


Fig. 4  $C_{ob} - V_{CB}$

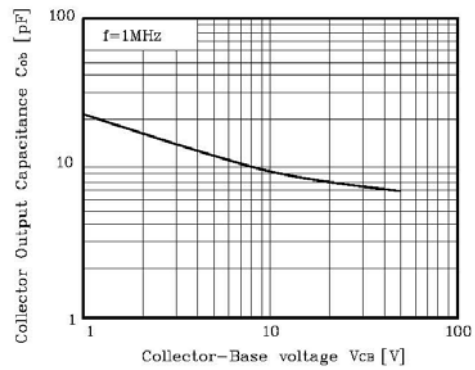


Fig. 5  $I_C - V_{CE}$

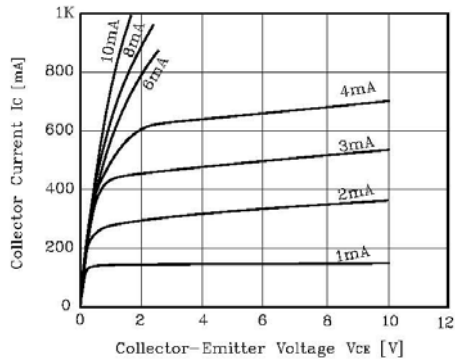


Fig. 6  $I_C - V_{CE}$

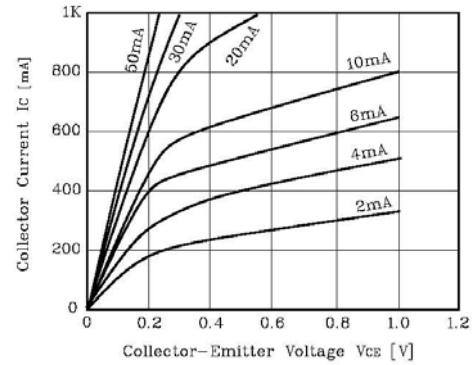


Fig. 7  $f_T - I_C$

