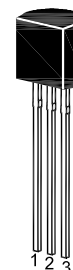


# ST 2SA1020

## PNP Silicon Epitaxial Transistor

Power amplifier application

Power switching application



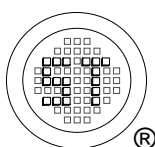
1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	50	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	2	A
Collector Power Dissipation	$P_{tot}$	900	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

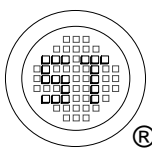
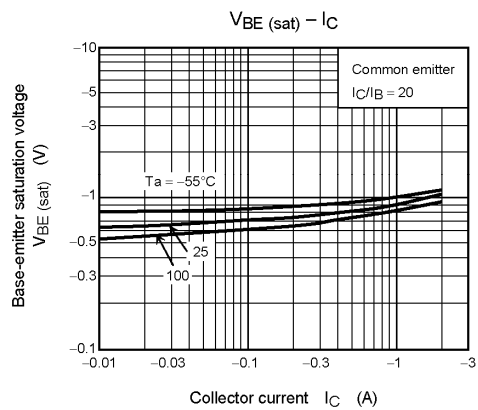
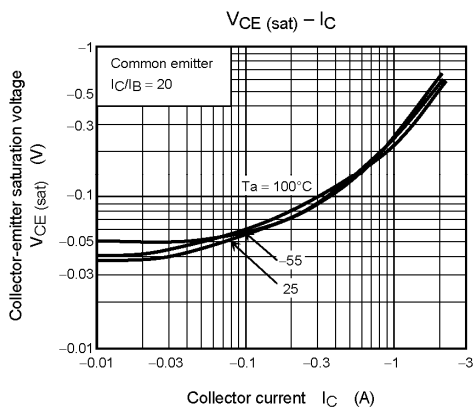
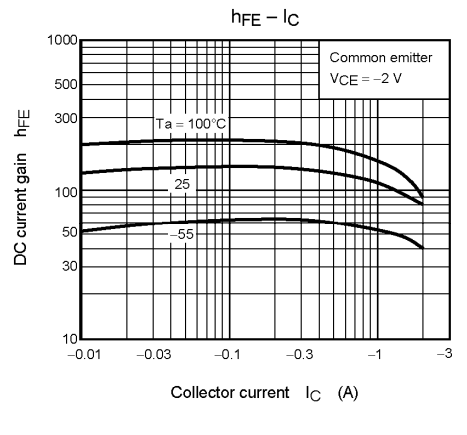
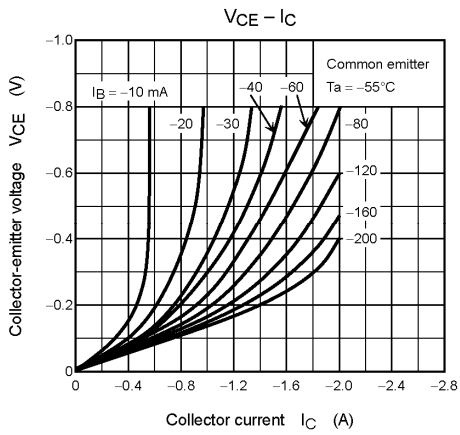
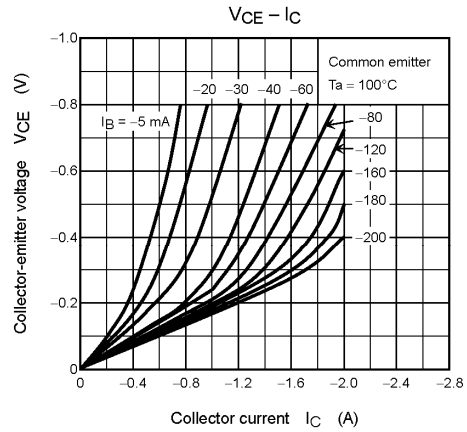
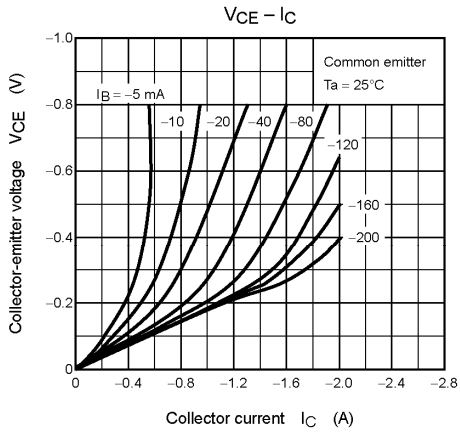
### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $-V_{CE} = 2\text{ V}$ , $-I_C = 0.5\text{ A}$ at $-V_{CE} = 2\text{ V}$ , $-I_C = 1.5\text{ A}$	Current Gain Group O Y	$h_{FE}$	70	-	140	-
		$h_{FE}$	120	-	240	-
		$h_{FE}$	40	-	-	-
Collector Base Cutoff Current at $-V_{CB} = 50\text{ V}$	$-I_{CBO}$	-	-	1	$\mu\text{A}$	
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	1	$\mu\text{A}$	
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	50	-	-	V	
Collector Emitter Saturation Voltage at $-I_C = 1\text{ A}$ , $-I_B = 0.05\text{ A}$	$-V_{CE(sat)}$	-	-	0.5	V	
Base Emitter Saturation Voltage at $-I_C = 1\text{ A}$ , $-I_B = 0.05\text{ A}$	$-V_{BE(sat)}$	-	-	1.2	V	
Transition Frequency at $-V_{CE} = 2\text{ V}$ , $-I_C = 0.5\text{ A}$	$f_T$	-	100	-	MHz	
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	40	-	pF	



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