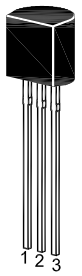
ST 2SA1300

PNP Silicon Epitaxial Planar Transistor
for strobo flash and medium power amplifier applications.

The transistor is subdivided into three groups, Y, G and L, according to its DC current gain.

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



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

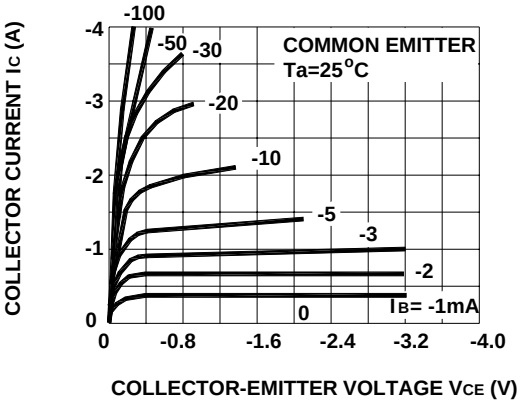
Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	20	V
Collector Emitter Voltage	$-V_{CES}$	20	V
Collector Emitter Voltage	$-V_{CEO}$	10	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	2	A
Collector Current Pulsed (PW = 10 ms)	$-I_{CP}$	5	A
Base Current	$-I_B$	0.2	A
Power Dissipation	P_{tot}	750	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

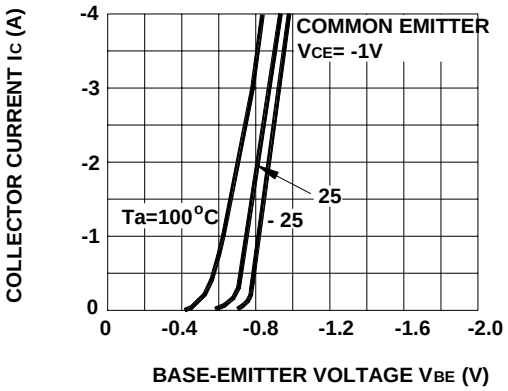
Characteristics at T_a = 25 °C

Parameter			Symbol	Min.	Typ.	Max.	Unit
DC Current Gain							
at $-V_{CE}$ = 1 V, $-I_C$ = 0.5 A	Current Gain Group	Y	h_{FE}	140	-	280	-
		G	h_{FE}	200	-	400	-
		L	h_{FE}	300	-	600	-
at $-V_{CE}$ = 1 V, $-I_C$ = 4 A			h_{FE}	60	-	-	-
Collector Base Cutoff Current at $-V_{CB}$ = 20 V			$-I_{CBO}$	-	-	0.1	µA
Emitter Base Cutoff Current at $-V_{EB}$ = 6 V			$-I_{EBO}$	-	-	0.1	µA
Collector Emitter Breakdown Voltage at $-I_C$ = 10 mA			$-V_{(BR)CEO}$	10	-	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 1 mA			$-V_{(BR)EBO}$	6	-	-	V
Collector to Emitter Saturation Voltage at $-I_C$ = 2 A, $-I_B$ = 50 mA			$-V_{CE(sat)}$	-	-	0.5	V
Base-Emitter Voltage at $-V_{CE}$ = 1 V, $-I_C$ = 2 A			$-V_{BE}$	-	-	1.5	V
Transition Frequency at $-V_{CE}$ = 1 V, $-I_C$ = 0.5 A			f_T	-	140	-	MHz
Collector Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz			C_{ob}	-	50	-	pF

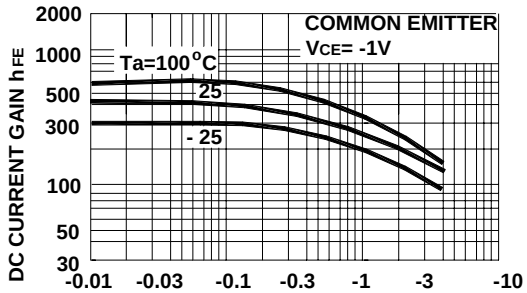
I_C - V_{CE}



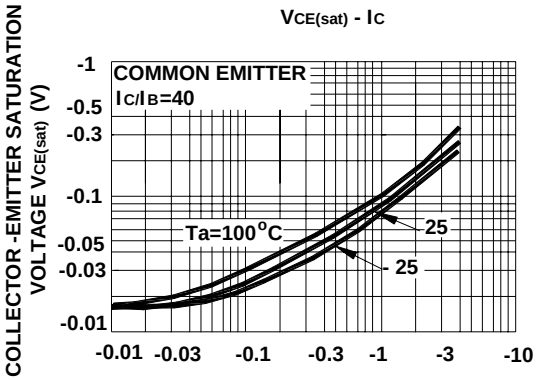
I_C - V_{BE}



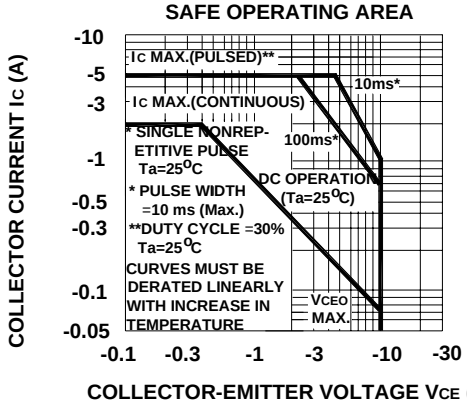
h_{FE} - I_C



$V_{CE(sat)}$ - I_C



SAFE OPERATING AREA



Pc - Ta