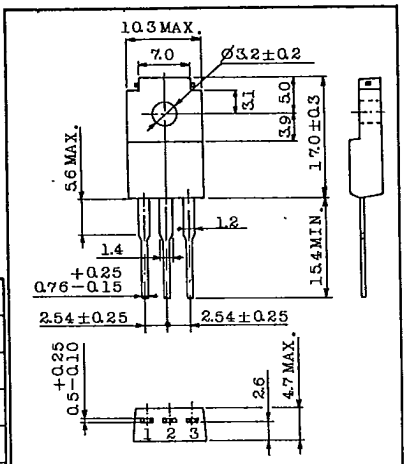
SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SA1307

HIGH CURRENT SWITCHING APPLICATIONS.

FEATURES:

- Low Saturation Voltage
  : $V_{CE(sat)}$=-0.4V(Max.) at I_C=-3A
- High Speed Switching Time : t_{stg}=1.0μs(Typ.)
- Complementary to 2SC3299



1. BASE
2. COLLECTOR
3. EMITTER

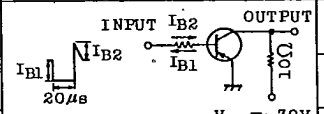
JEDEC	—
EIAJ	—
TOSHIBA	2-10L1A

Weight : 2.1g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-60	V
Collector-Emitter Voltage		V_{CEO}	-50	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current		I_C	-5	A
Base Current		I_B	-1	A
Collector Power	Ta=25°C	P_C	2.0	W
	Tc=25°C		20	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-50V, I_E=0	-	-	-1	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-1	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=-10mA, I_B=0	-50	-	-	V
DC Current Gain		$h_{FE(1)}$ (Note)	V_{CE}=-1V, I_C=-1A	70	-	240	
		$h_{FE(2)}$	V_{CE}=-1V, I_C=-3A	30	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=-3A, I_B=-0.15A	-	-0.2	-0.4	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=-3A, I_B=-0.15A	-	-0.9	-1.2	V
Transition Frequency		f_T	V_{CE}=-4V, I_C=-1A	-	60	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz	-	170	-	pF
Switching Time	Turn-on Time	t_{on}		-	0.1	-	μs
	Storage Time	t_{stg}		-	1.0	-	
	Fall Time	t_f		-	0.1	-	

$-I_{B1}=I_{B2}$=0.15A
DUTY CYCL≦1%

Note : $h_{FE(1)}$ Classification O : 70 ~ 140, Y : 120 ~ 240

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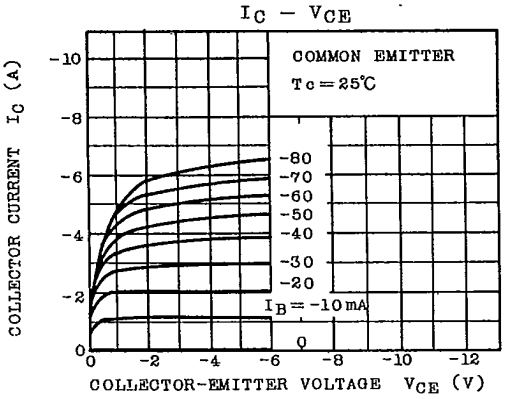
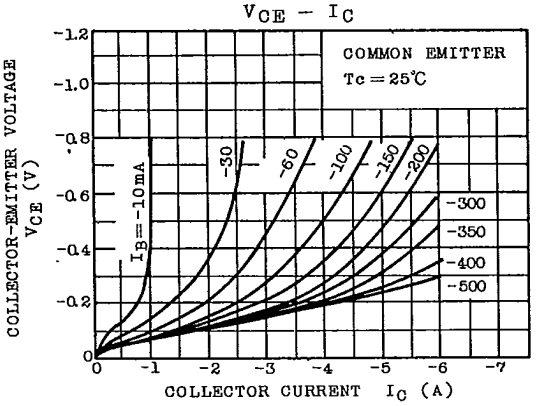
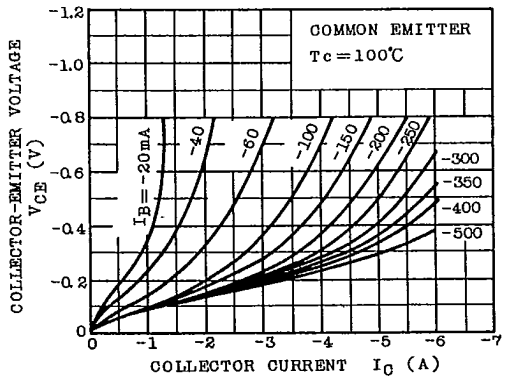
$I_C - V_{CE}$



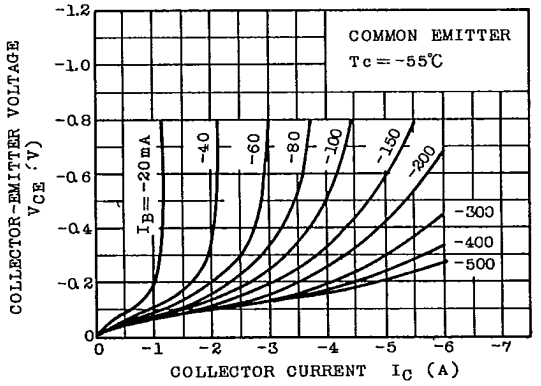
$V_{CE} - I_C$



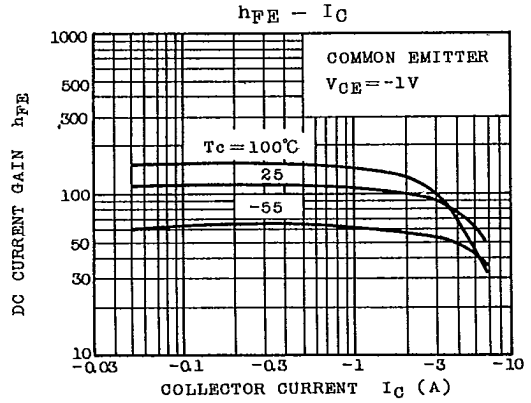
$V_{CE} - I_C$



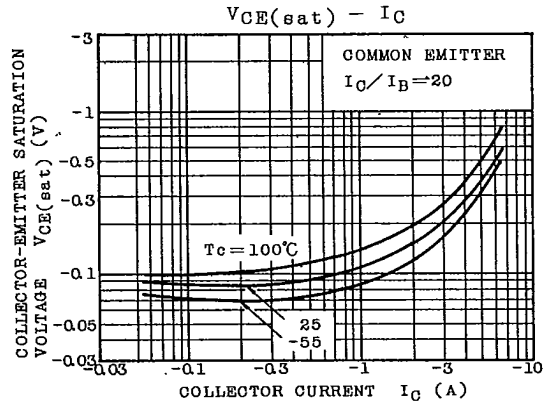
$V_{CE} - I_C$



$h_{FE} - I_C$



$V_{CE(sat)} - I_C$



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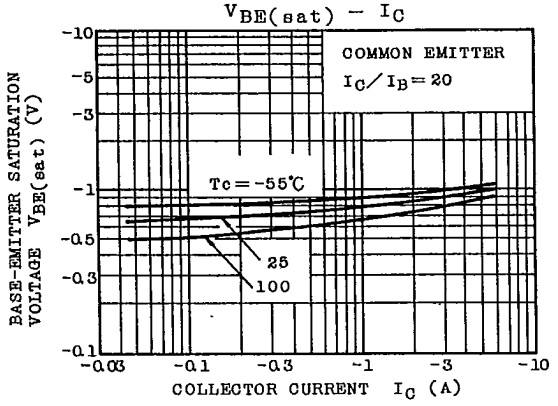
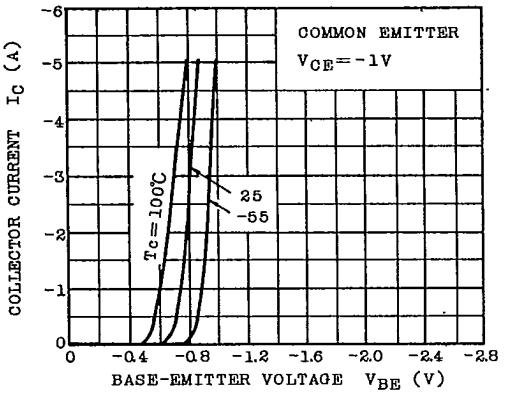
$V_{BE(sat)} - I_C$



$I_C - V_{BE}$



SAFE OPERATING AREA