2SA1020

INDUSTRIAL APPLICATIONS

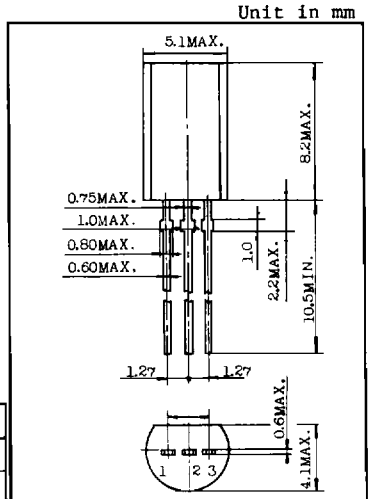
POWER AMPLIFIER APPLICATIONS.

POWER SWITCHING APPLICATIONS.

FEATURES:

- Low Collector Saturation Voltage
  : $V_{CE(sat)}$=-0.5V (Max.) (I_C=-1A)
- High Speed Switching Time : t_{stg}=1.0μs (Typ.)
- Complementary to 2SC2655.

Unit in mm



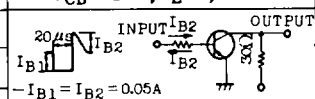
JEDEC	TO – 92MOD
EIAJ	–
TOSHIBA	2 – 5J1A

Weight : 0.36g

MAXIMUM RATINGS (Ta=25°C)

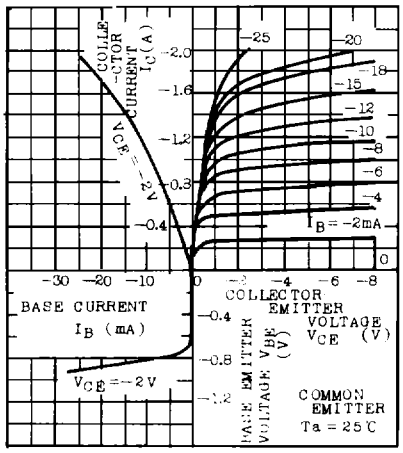
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-2	A
Collector Power Dissipation	P_C	900	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55∿150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

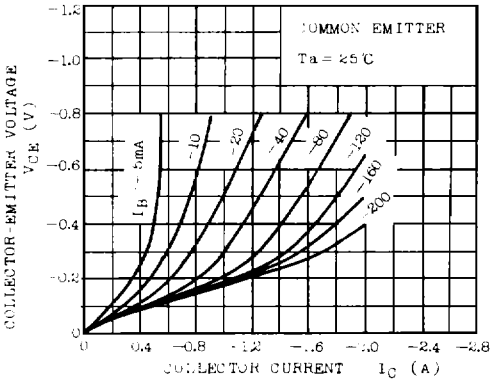
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-50V, I_E=0	–	–	-1.0	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=-5V, I_C=0	–	–	-1.0	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=-10mA, I_B=0	-50	–	–	V
DC Current Gain		$h_{FE(1)}$	V_{CE}=-2V, I_C=-0.5A (Note)	70	–	240	
		$h_{FE(2)}$	V_{CE}=-2V, I_B=-1.5A	40	–	–	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=-1A, I_B=-0.05A	–	–	-0.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=-1A, I_B=-0.05A	–	–	-1.2	V
Transition Frequency		f_T	V_{CE}=-2V, I_C=-0.5A	–	100	–	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz	–	40	–	pF
Switching Time	Turn-on Time	t_{on}		–	0.1	–	μs
	Storage Time	t_{stg}		–	1.0	–	
	Fall Time	t_f		–	0.1	–	

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

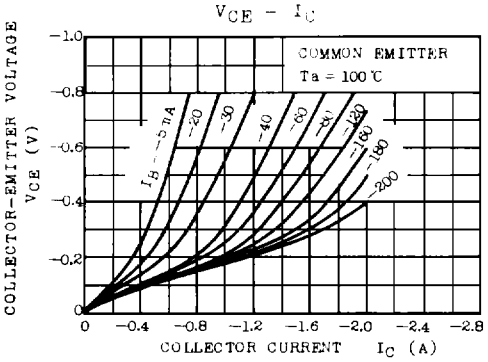
STATIC CHARACTERISTICS



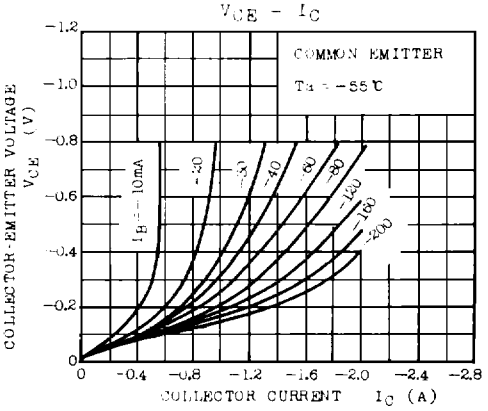
V_{CE} – I_C



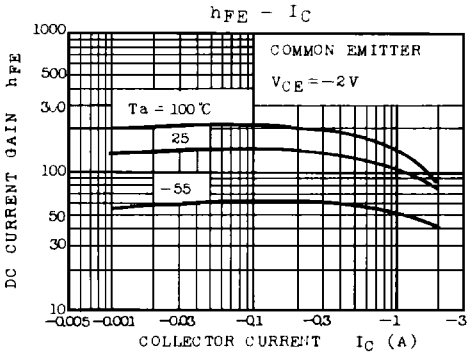
V_{CE} – I_C



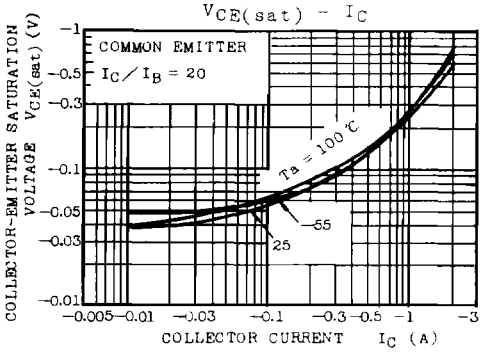
V_{CE} – I_C



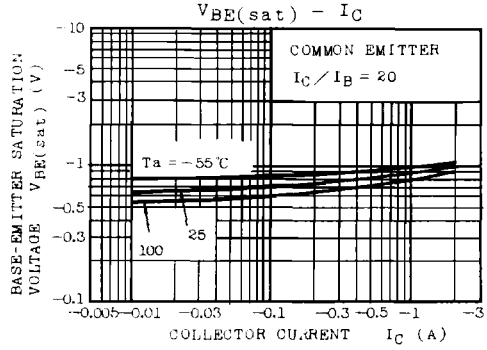
h_{FE} – I_C



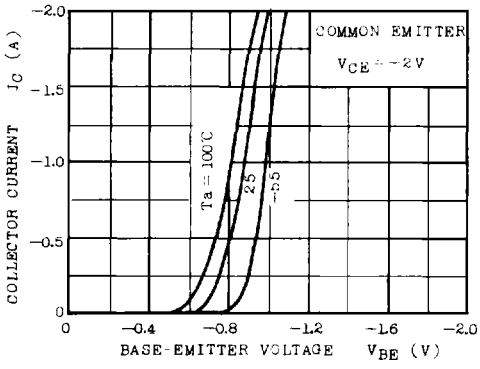
$V_{CE(sat)} - I_C$



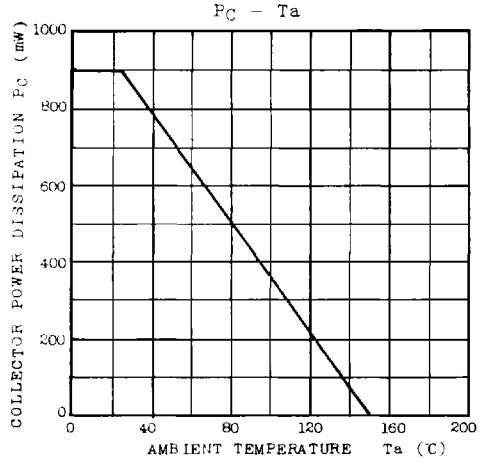
$V_{BE(sat)} - I_C$



$I_C - V_{BE}$



$P_C - Ta$



SAFE OPERATING AREA