SILICON NPN TRIPLE DIFFUSED TYPE

2SD843

INDUSTRIAL APPLICATIONS

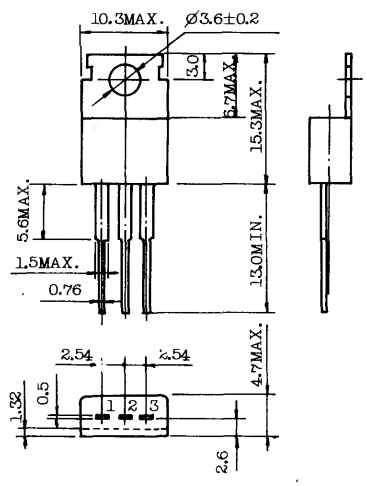
HIGH CURRENT SWITCHING APPLICATIONS.

POWER AMPLIFIER APPLICATIONS.

FEATURES:

- Low Saturation Voltage
  : $V_{CE(sat)}$=0.5V (Max.) (at I_C=4A)
- Complementary to 2SB753.

Unit in mm



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

JEDEC	TO — 220AB
EIAJ	SC — 46
TOSHIBA	2 —10A1A

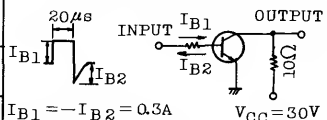
Mounting Kit No. AC75

Weight : 1.9g

MAXIMUM RATINGS (Ta=25°C)

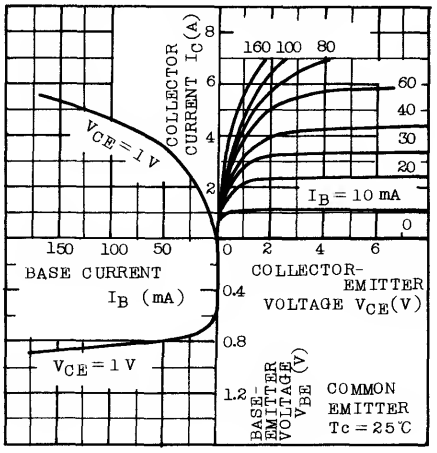
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	100	V
Collector-Emitter Voltage		V_{CEO}	80	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current		I_C	7	A
Collector Power Dissipation	Ta=25°C	P_C	1.5	W
	Tc=25°C		40	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55∿150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

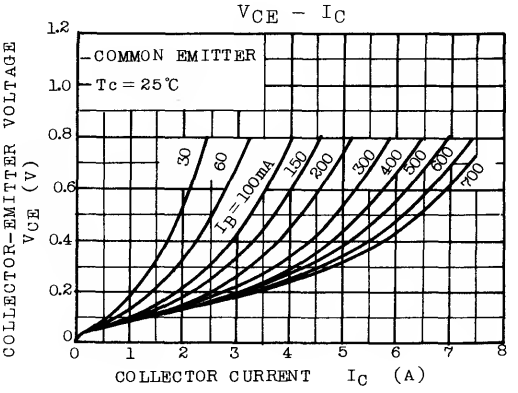
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=100V, I_E=0	-	-	5	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=5V, I_C=0	-	-	5	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=50mA, I_B=0	80	-	-	V
DC Current Gain		$h_{FE(1)}$ (Note)	V_{CE}=1V, I_C=1A	70	-	240	
		$h_{FE(2)}$	V_{CE}=1V, I_C=4A	30	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	I_C=4A, I_B=0.4A	-	0.25	0.5	V
	Base-Emitter	$V_{BE(sat)}$	I_C=4A, I_B=0.4A	-	0.9	1.4	
Transition Frequency		f_T	V_{CE}=4V, I_C=1A	-	10	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	250	-	pF
Switching Time	Turn-on Time	t_{on}		-	0.4	-	μs
	Storage Time	t_{stg}		-	2.5	-	
	Fall Time	t_f		-	0.5	-	

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

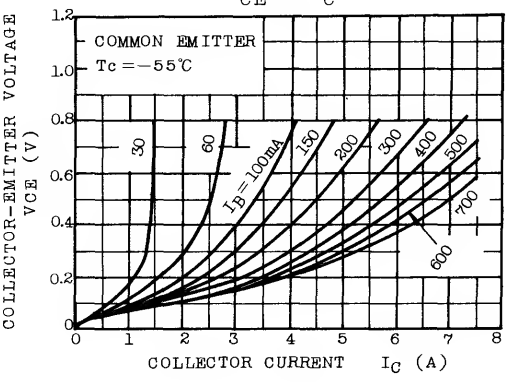
STATIC CHARACTERISTICS



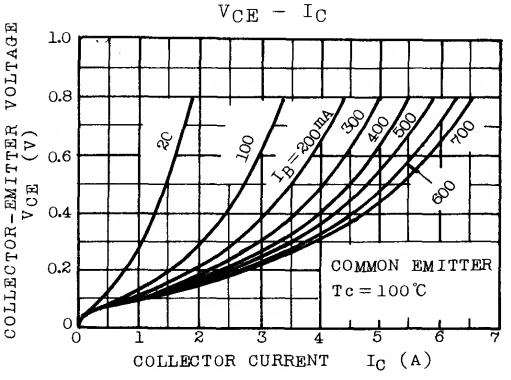
V_{CE} – I_C



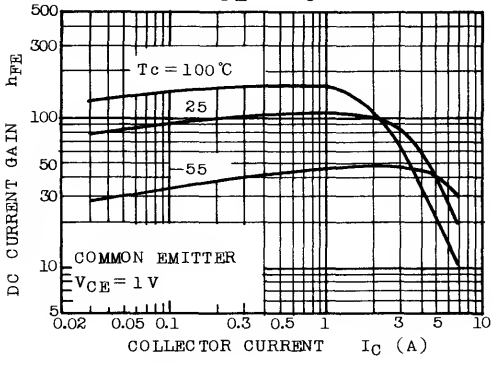
V_{CE} – I_C



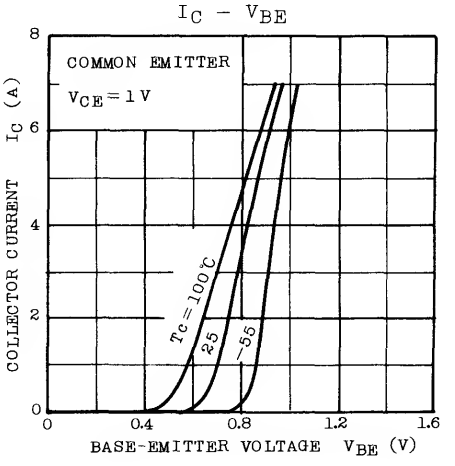
V_{CE} – I_C



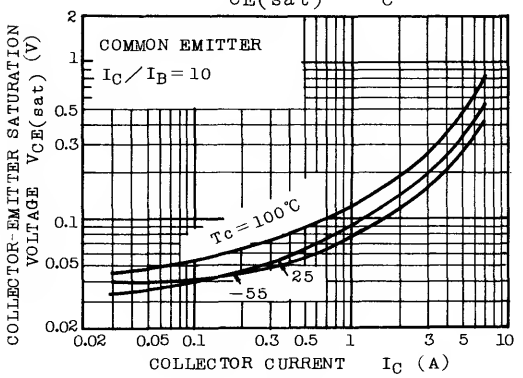
h_{FE} – I_C



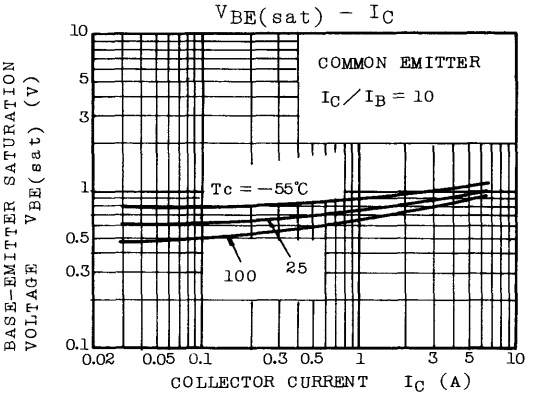
I_C – V_{BE}



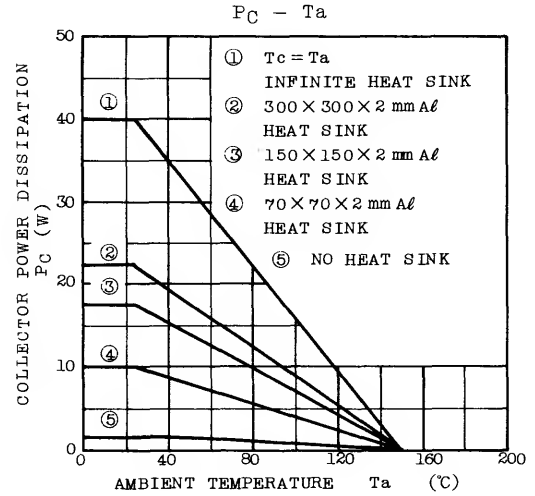
$V_{CE(sat)}$ – I_C



$V_{BE(sat)}$ – I_C



P_C – Ta



SAFE OPERATING AREA