

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07760 D T-33-29

SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

# 2SD686

SWITCHING APPLICATIONS.  
HAMMER DRIVE, PULSE MOTOR DRIVE APPLICATIONS.  
POWER AMPLIFIER APPLICATIONS.

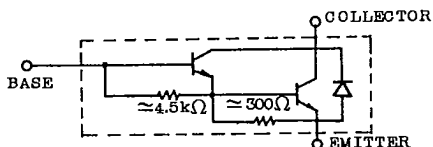
FEATURES:-

- High DC Current Gain :  $h_{FE}=2000$  (Min.) ( $V_{CE}=2V, I_C=1A$ )
- Complementary to 2SB676.

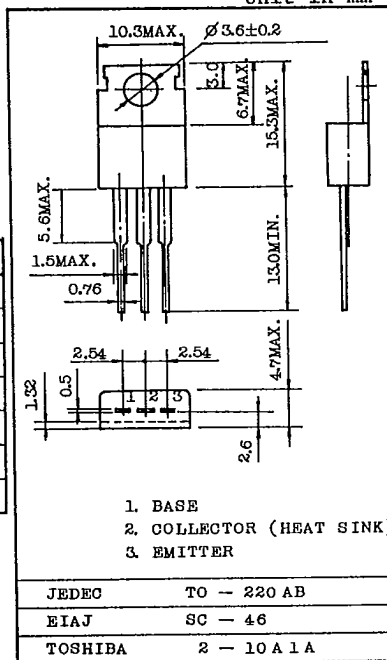
MAXIMUM RATINGS ( $T_a=25^\circ C$ )

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
Continuous Collector Current	$I_C$	4	A
Collector Power Dissipation ( $T_c=25^\circ C$ )	$P_C$	30	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$

EQUIVALENT CIRCUIT



INDUSTRIAL APPLICATIONS  
Unit in mm



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

JEDEC TO - 220 AB

EIAJ SC - 46

TOSHIBA 2 - 10A 1A

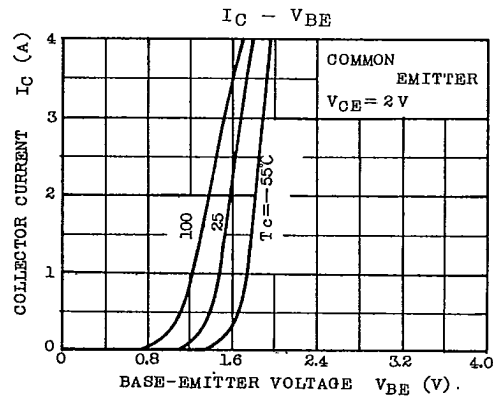
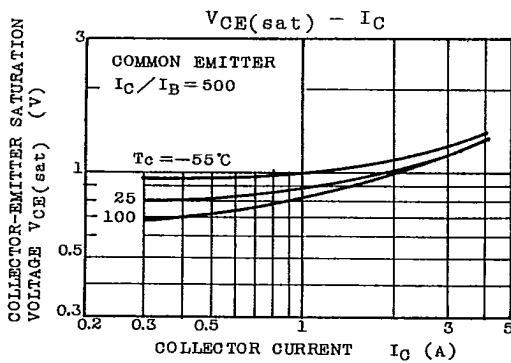
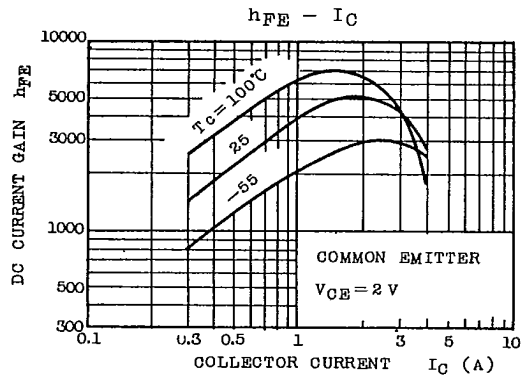
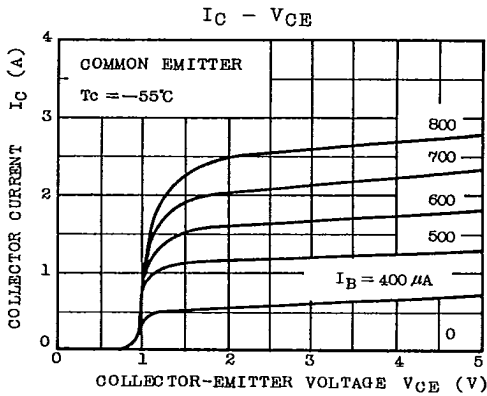
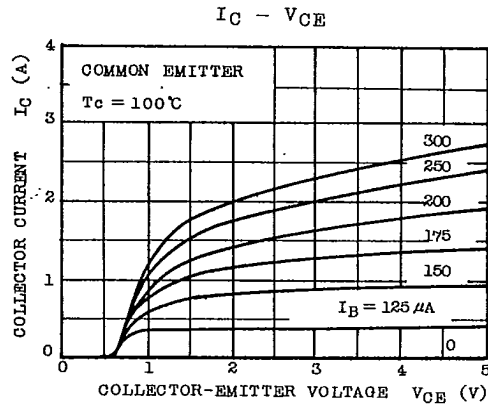
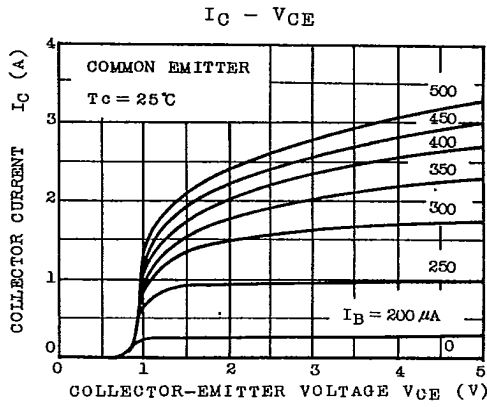
Mounting Kit No. AC75

Weight : 1.9g

ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

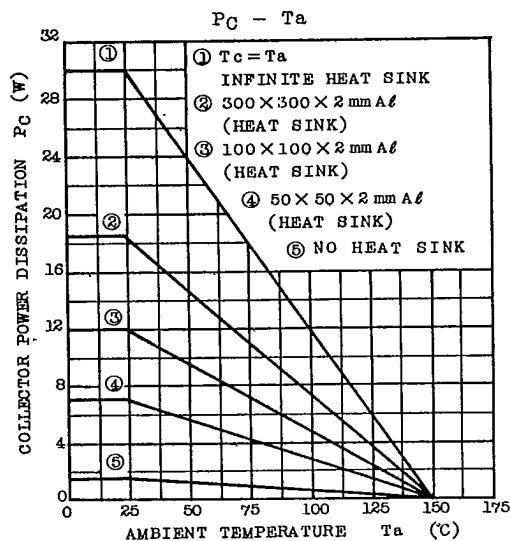
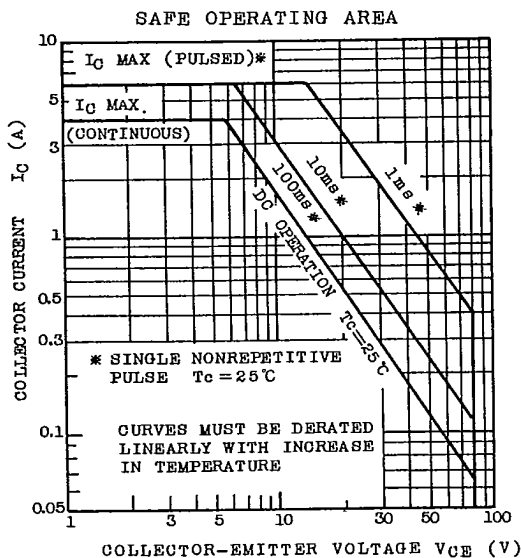
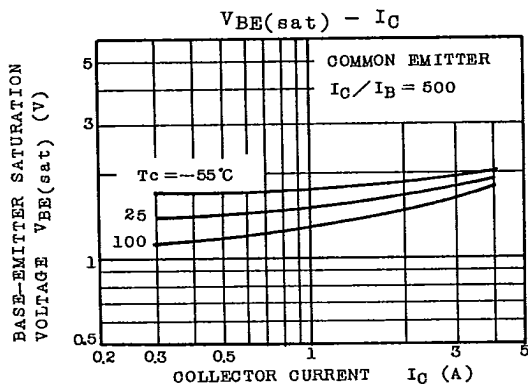
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=100V, I_E=0$	-	-	20	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	2.5	mA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	80	-	-	V
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2V, I_C=1A$	2000	-	-	
	$h_{FE(2)}$	$V_{CE}=2V, I_C=3A$	1000	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	-	-	1.5	V
	Base-Emitter	$V_{BE(sat)}$	-	-	2.0	
Switching Time	Turn-on Time	$t_{on}$	-	0.2	-	$\mu s$
	Storage Time	$t_{stg}$	-	1.5	-	
	Fall Time	$t_f$	-	0.6	-	

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