

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07852 07-33-09

SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

**2SD1052A**

## AUDIO FREQUENCY POWER AMPLIFIER APPLICATIONS.

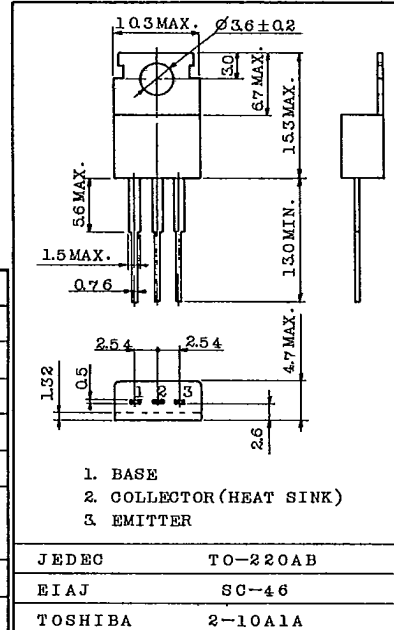
Unit in mm

## FEATURES :

- High DC Current Gain of 400 to 1200 at  
 $V_{CE}=5V$ ,  $I_C=0.5A$
- Low  $V_{CE(sat)}$  of 1.0V (MAX.) at  $I_C=1A$ ,  $I_B=0.02A$
- Collector Power Dissipation of 30W at  $T_c=25^\circ C$

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CB0}$	50	V
Collector-Emitter Voltage		$V_{CEO}$	50	V
Emitter-Base Voltage		$V_{EBO}$	7	V
Collector Current		$I_C$	3	A
Base Current		$I_B$	0.5	A
Collector Power Dissipation	$T_a=25^\circ C$	$P_C$	1.5	W
	$T_c=25^\circ C$		30	
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$



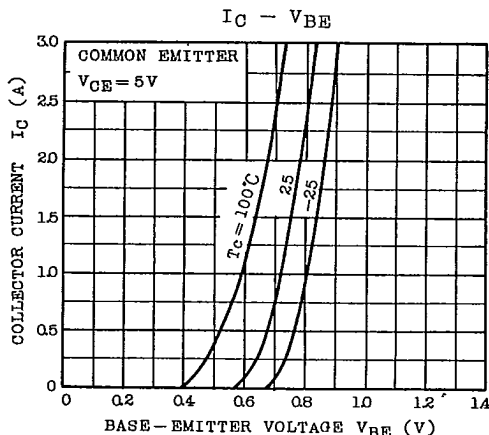
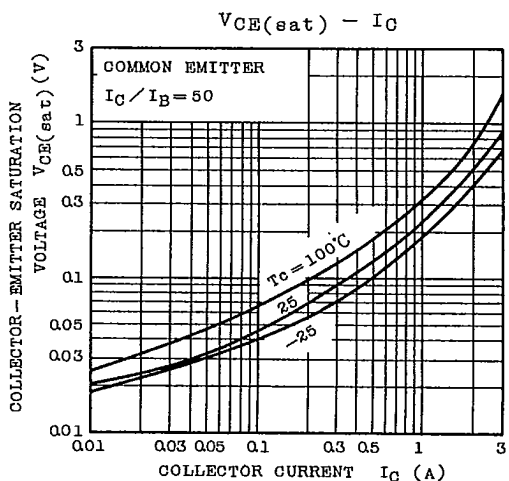
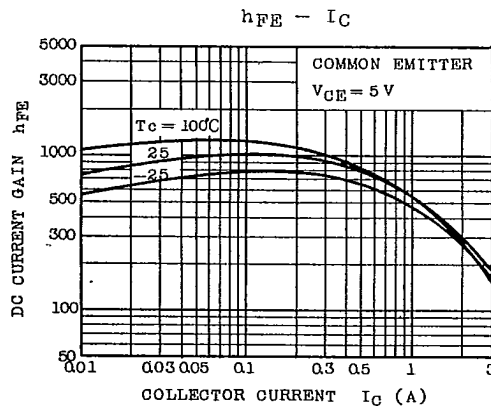
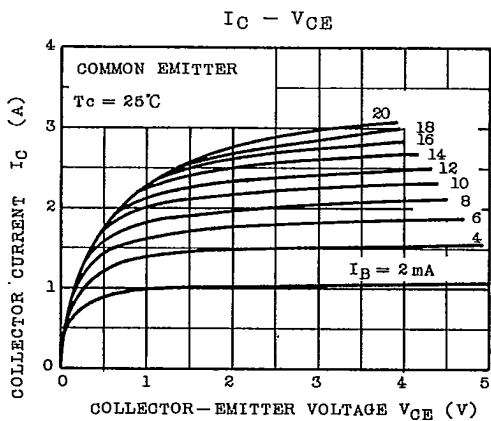
Mounting kit No.AC75  
Weight : 1.9g

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

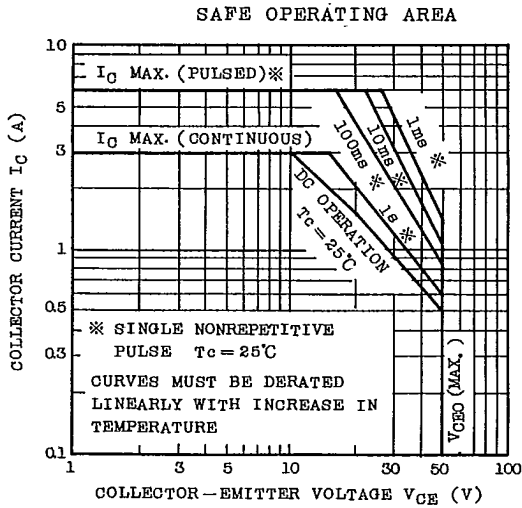
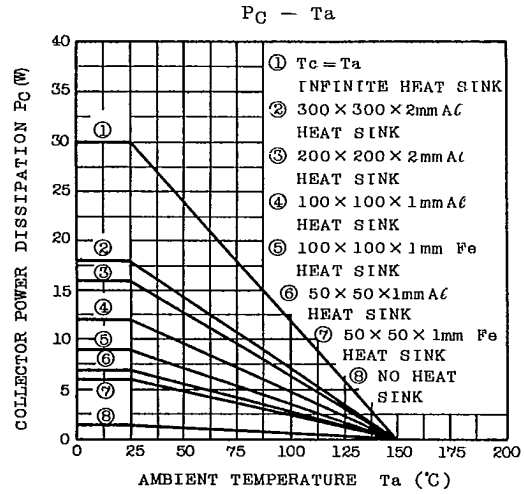
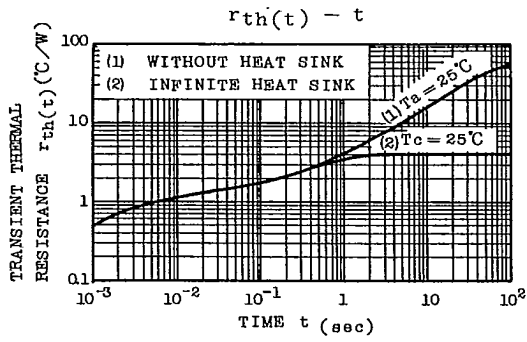
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=50V$ , $I_E=0$	-	-	100	$\mu A$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=7V$ , $I_C=0$	-	-	100	$\mu A$
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=50mA$ , $I_B=0$	50	-	-	V
DC Current Gain		$h_{FE}$	$V_{CE}=5V$ , $I_C=0.5A$	400	-	1200	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=1A$ , $I_B=0.02A$	-	0.25	1.0	V
Base-Emitter Voltage		$V_{BE}$	$V_{CE}=5V$ , $I_C=0.5A$	-	0.7	1.0	V
Transition Frequency		$f_T$	$V_{CE}=5V$ , $I_C=0.5A$	-	5.0	-	MHz
Collector Output Capacitance		$C_{ob}$	$V_{CB}=10V$ , $I_B=0$ , $f=1MHz$	-	70	-	pF
Switching Time	Turn-on Time	$T_{on}$		-	2.0	-	$\mu s$
	Storage Time	$T_{stg}$		-	5.0	-	
	Fall Time	$T_f$		-	3.0	-	

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