

SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

# 2SD1052A

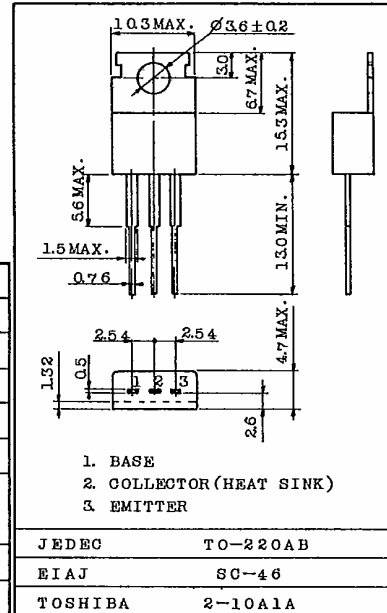
AUDIO FREQUENCY POWER AMPLIFIER APPLICATIONS.

**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	$V_{CE0}$	50	V
Emitter-Base Voltage	$V_{EB0}$	7	V
Collector Current	$I_C$	3	A
Base Current	$I_B$	0.5	A
Collector Power Dissipation	PC	$T_a=25^\circ C$	1.5
		$T_c=25^\circ C$	30
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$

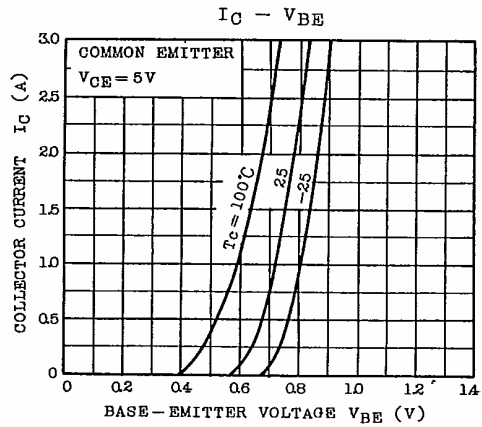
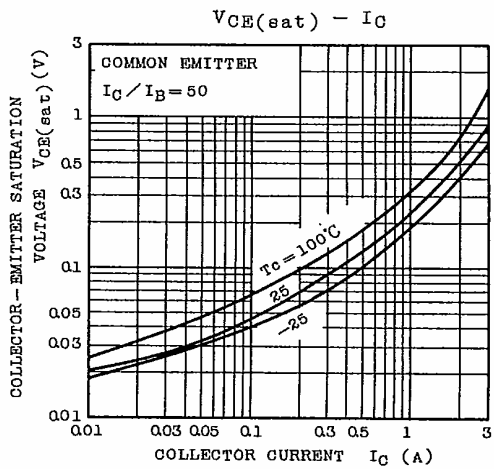
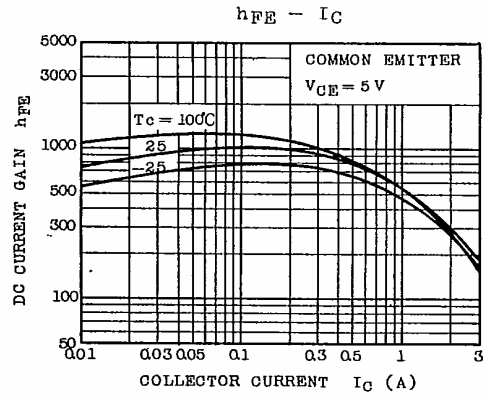
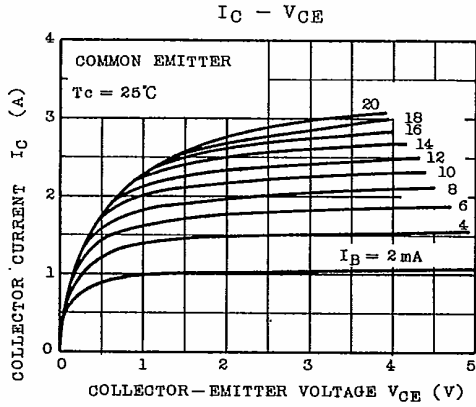


Mounting kit No.AC75  
Weight : 1.9g

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

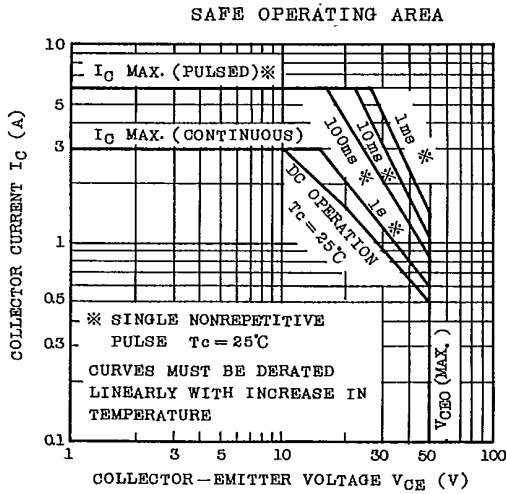
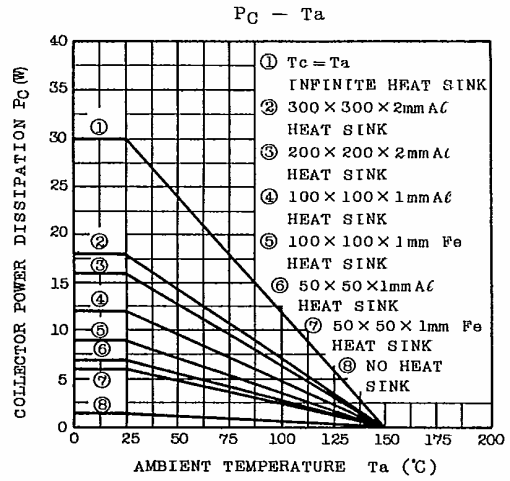
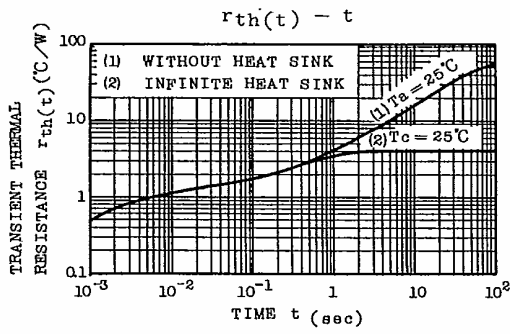
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CB0}$	$V_{CB}=50V, I_E=0$	-	-	100	$\mu A$
Emitter Cut-off Current	$I_{EB0}$	$V_{EB}=7V, I_C=0$	-	-	100	$\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=50mA, I_B=0$	50	-	-	V
DC Current Gain	$h_{FE}$	$V_{CE}=5V, I_C=0.5A$	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	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	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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