

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07648 07-33-13

SILICON NPN TRIPLE DIFFUSED TYPE

**2SC3181**

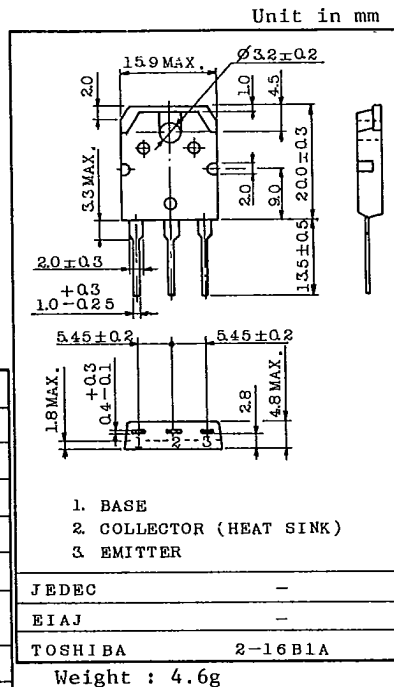
## POWER AMPLIFIER APPLICATIONS.

## FEATURES:

- Complementary to 2SA1264
- Recommend for 55W High Fidelity Audio Frequency Amplifier Output Stage.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CB0}$	120	V
Collector-Emitter Voltage	$V_{CE0}$	120	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Collector Current	$I_C$	8	A
Base Current	$I_B$	0.8	A
Collector Power Dissipation ( $T_c=25^\circ\text{C}$ )	$P_C$	80	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 ~ 150	$^\circ\text{C}$

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CB0}$	$V_{CB}=120\text{V}, I_E=0$	-	-	5.0	$\mu\text{A}$
Emitter Cut-off Current	$I_{EB0}$	$V_{EB}=5\text{V}, I_C=0$	-	-	5.0	$\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=50\text{mA}, I_B=0$	120	-	-	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=5\text{V}, I_C=1\text{A}$	55	-	160	
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=4\text{A}$	35	75	-	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=6\text{A}, I_B=0.6\text{A}$	-	0.35	2.0	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=5\text{V}, I_C=4\text{A}$	-	0.95	1.5	V
Transition Frequency	$f_T$	$V_{CE}=5\text{V}, I_C=1\text{A}$	-	30	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	-	190	-	pF

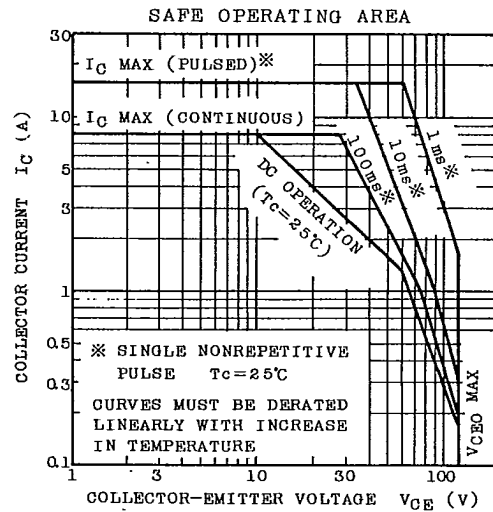
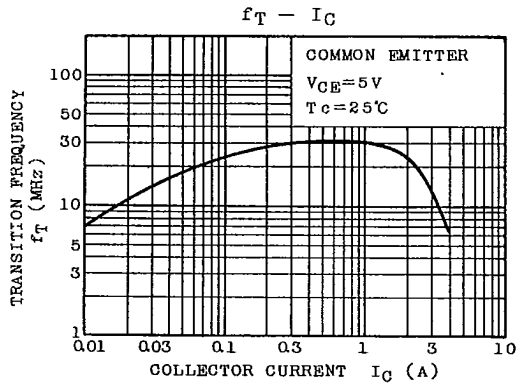
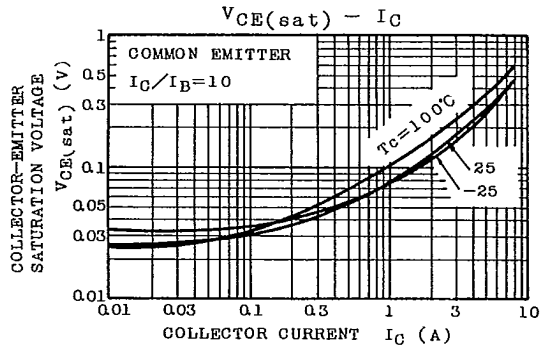
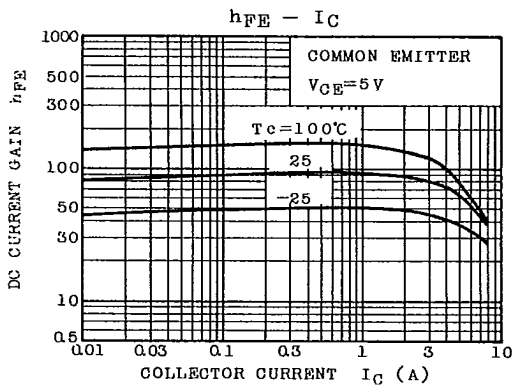
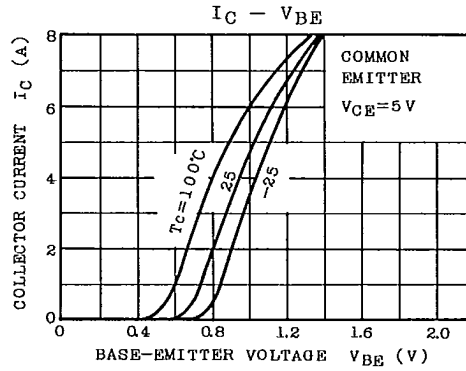
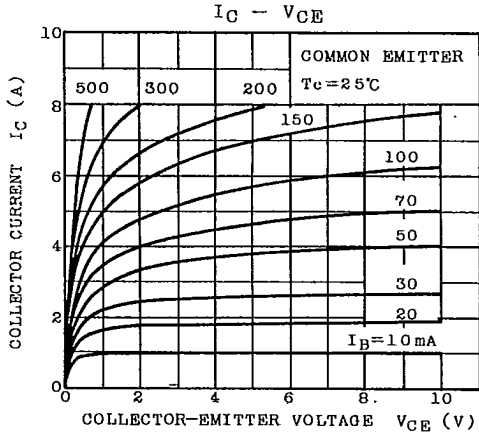
Note :  $h_{FE(1)}$  Classification, R : 55~110 0 : 80~160

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