

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07505

D T-33-07

2SC2231

2SC2231A

SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

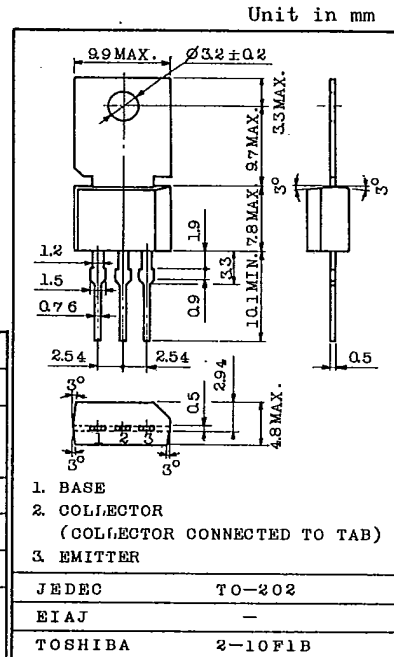
HIGH VOLTAGE GENERAL AMPLIFIER APPLICATIONS.
COLOR TV CLASS B SOUND OUTPUT APPLICATIONS.

FEATURES:

- High Voltage : $V_{CE0}=180V$ (2SC2231A)

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	200	V
Collector-Emitter Voltage	2SC2231	160	V
	2SC2231A	180	
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	200	mA
Base Current	I_B	100	mA
Collector Power Dissipation	PC	$T_a=25^\circ C$	1.5
		$T_c=25^\circ C$	12
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



Weight :1.4g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=200V, I_E=0$	-	-	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	0.1	μA
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=10V, I_C=50mA$	100	-	320	-
	$h_{FE(2)}$	$V_{CE}=10V, I_C=150mA$	80	-	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=200mA, I_B=20mA$	-	-	1.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=10V, I_C=5mA$	0.55	0.65	0.75	V
Transition Frequency	f_T	$V_{CE}=10V, I_C=50mA$	50	-	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	-	10	pF

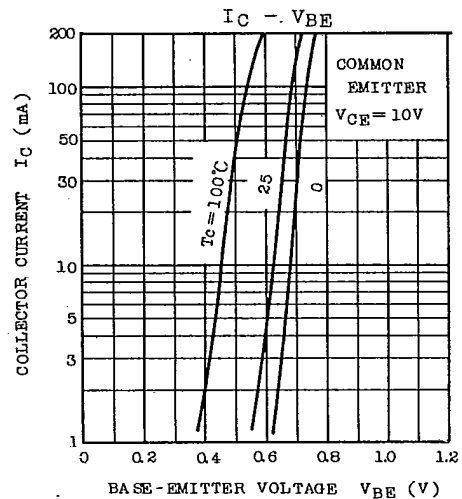
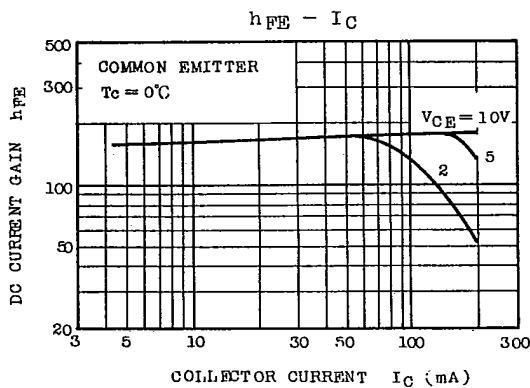
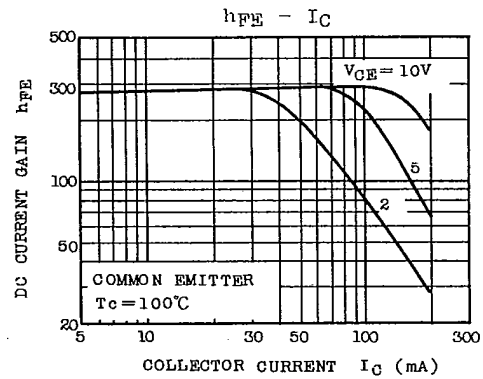
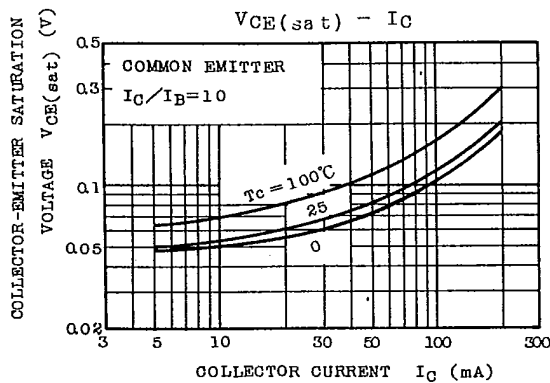
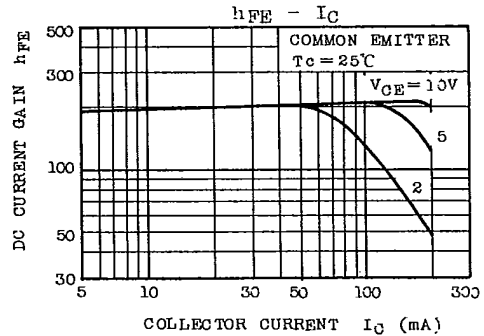
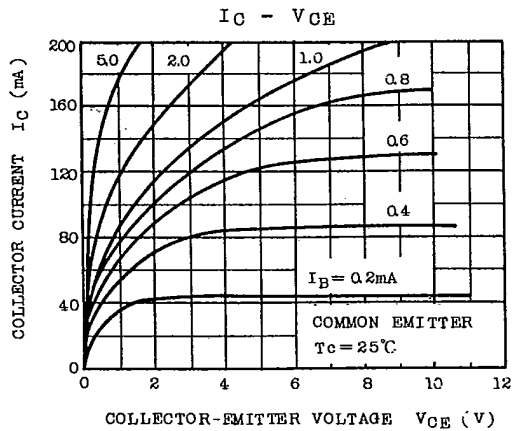
Note : $h_{FE(1)}$ Classification O:100~200, Y:160~320

TOSHIBA CORPORATION

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07506 07-33-07

2SC2231-2SC2231A

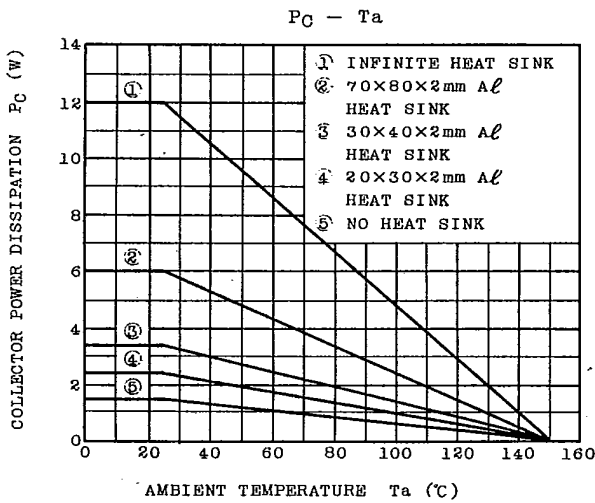
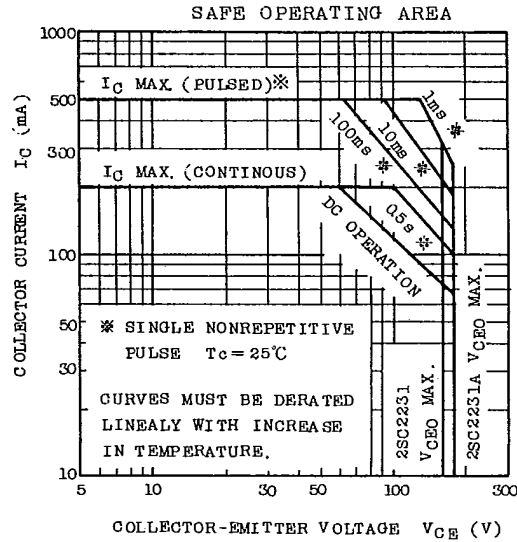
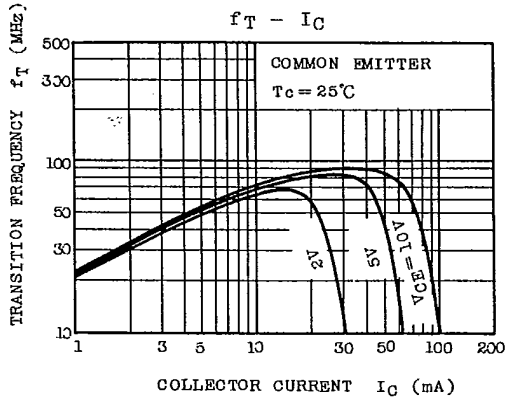


TOSHIBA CORPORATION

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07507 07-33-07

2SC2231 • 2SC2231A



TOSHIBA CORPORATION