

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

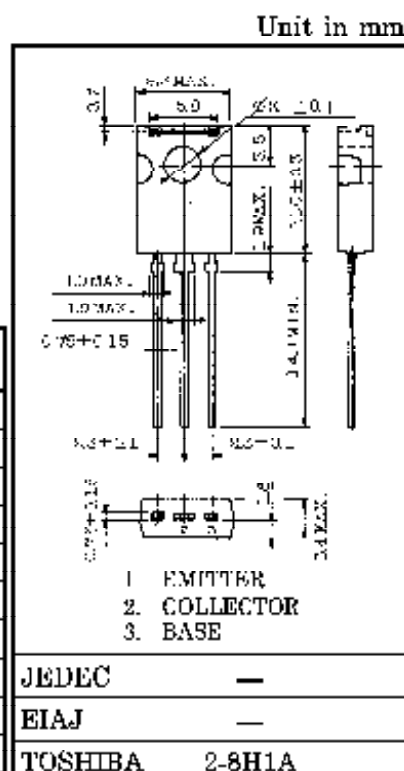
2SA1357

STROBE FLASH APPLICATIONS.
AUDIO POWER AMPLIFIER APPLICATIONS.

- MIN h_{FE} of 70 at $-2V$, $-4A$.
- $-5A$ Rated Collector Current.
- MAX $V_{CE(sat)}$ of $-1.0V$ at $-4A$ I_C .
- $10W$ at $25^{\circ}C$ Case Temperature.

MAXIMUM RATINGS (T_a = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-35	V
Collector-Emitter Voltage		V_{CEO}	-20	V
Emitter-Base Voltage		V_{EB0}	-8	V
Collector Current	DC	I_C	-5	A
	Pulsed (Note 1)	I_{CP}	-8	A
Base Current		I_B	-1	A
Collector Power Dissipation	$T_a = 25^{\circ}\text{C}$	P_C	1.5	W
	$T_c = 25^{\circ}\text{C}$		10	W
Junction Temperature		T_j	150	$^{\circ}\text{C}$
Storage Temperature Range		T_{str}	-55~150	$^{\circ}\text{C}$



Note 1 : Pulse Test : Pulse Width=10ms(Max.)
Duty Cycle=80%(Max.)

Weight : 0.82g

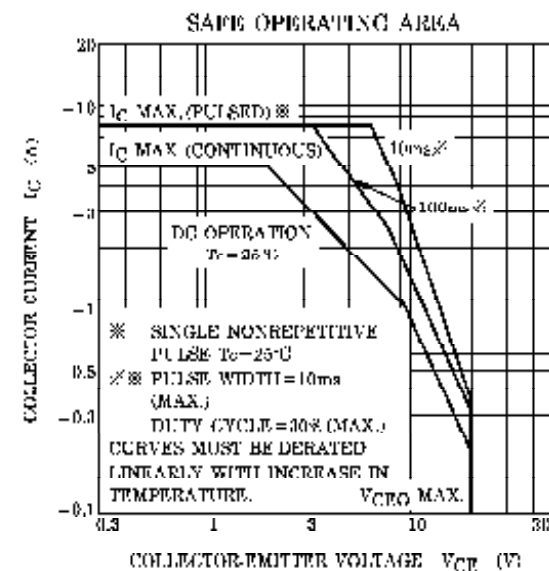
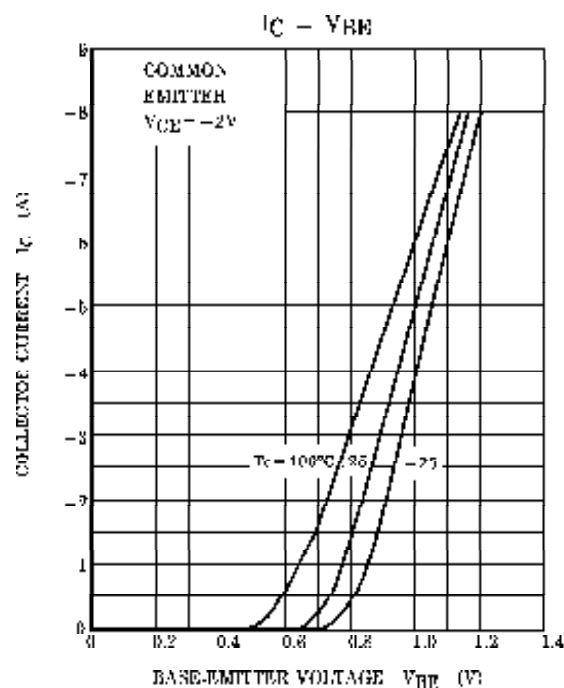
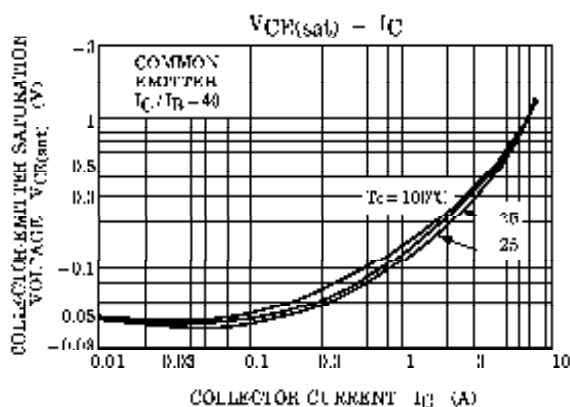
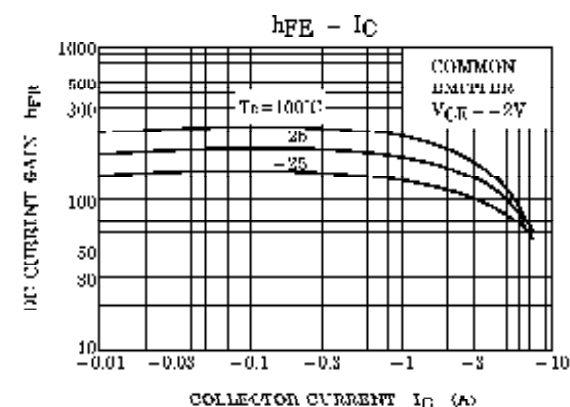
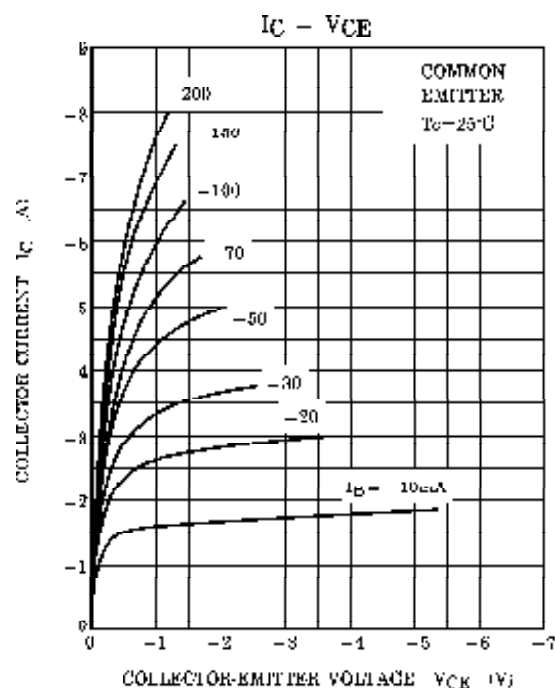
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = -35V, I_E = 0$	—	—	-100	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -8V, I_C = 0$	—	—	-100	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	20			V
DC Current Gain	$h_{FE(1)}$ (Note 2)	$V_{CE} = -2V, I_C = -0.5A$	100	—	320	
	$h_{FE(2)}$	$V_{CE} = -2V, I_C = -4A$	70	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -4A, I_B = -0.1A$	—	—	-1.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = -2V, I_C = -4A$	—	—	-1.5	V
Transition Frequency	f_T	$V_{CE} = 2V, I_C = 0.5A$		170		MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	62	—	pF

Note : hpf(1) Classification O : 100~200, Y : 160~320

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