TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

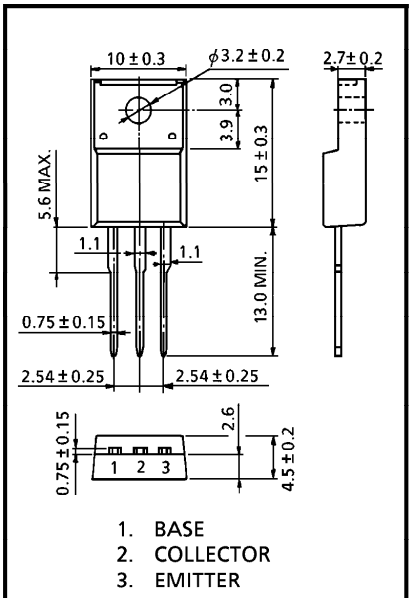
2SA1327A

STROBE FLASH APPLICATIONS

AUDIO POWER AMPLIFIER APPLICATIONS

- High DC Current Gain : h_{FE} = 70 (min.) (V_{CE} = −2V, I_C = −1A)
- Low Collector Saturation Voltage : $V_{CE\ (sat)}$ = −0.5V (max.) (I_C = −8A, I_B = −0.4A)
- High Collector Power Dissipation : P_C = 20W (Tc = 25°C)

Unit in mm



1. BASE
2. COLLECTOR
3. EMITTER

JEDEC	—
EIAJ	—
TOSHIBA	2-10R1A

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	−50	V
Collector-Emitter Voltage		V_{CEO}	−20	V
Emitter-Base Voltage		V_{EBO}	−8	V
Collector Current	DC	I_C	−10	A
	Pulse	I_{CP}	−20	
Base Current		I_B	−2	A
Collector Power Dissipation	Ta = 25°C	P_C	2.0	W
	Tc = 25°C		20	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = −50V, I_E = 0	—	—	−1.0	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = −8V, I_C = 0	—	—	−1.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)\ CEO}$	I_C = −10mA, I_B = 0	−20	—	—	V
DC Current Gain	$h_{FE\ (1)}$ (Note)	V_{CE} = −2V, I_C = −1A	100	—	320	—
	$h_{FE\ (2)}$	V_{CE} = −2V, I_C = −8A	70	140	—	
Collector-Emitter Saturation Voltage	$V_{CE\ (sat)}$	I_C = −8A, I_B = −0.4A	—	−0.3	−0.5	V
Base-Emitter Voltage	V_{BE}	V_{CE} = −2V, I_C = −8A	—	−0.95	−1.5	V
Transition Frequency	f_T	V_{CE} = −2V, I_C = −1A	—	45	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = −10V, I_E = 0, f = 1MHz	—	400	—	pF

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

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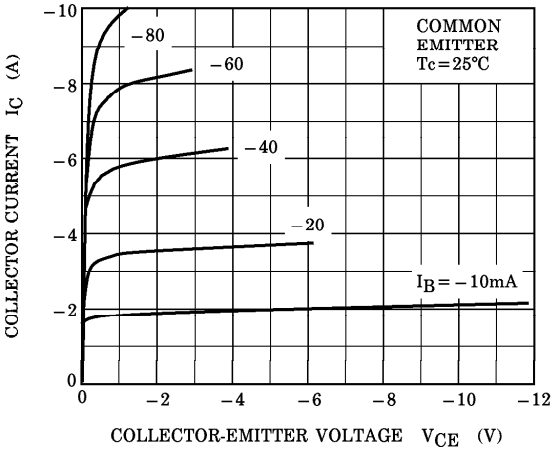
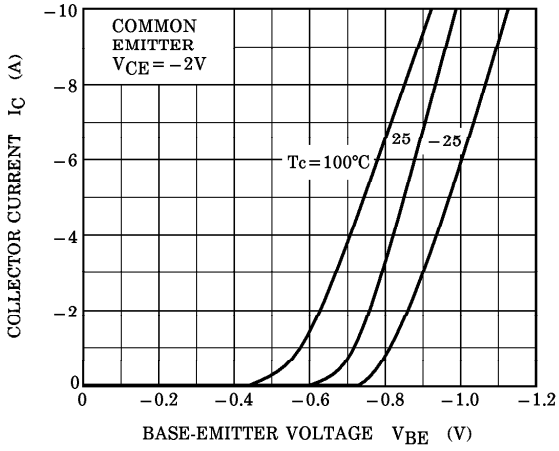
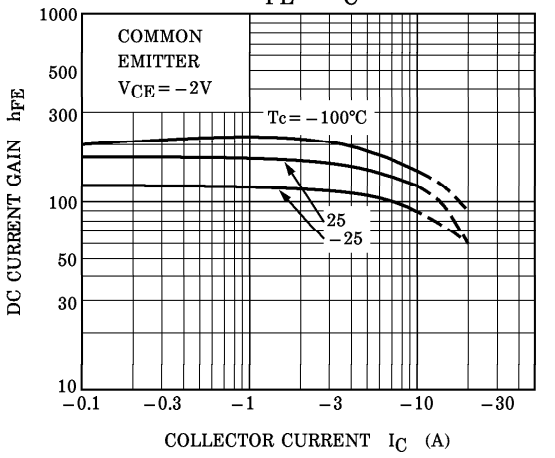
I_C – V_{CE}



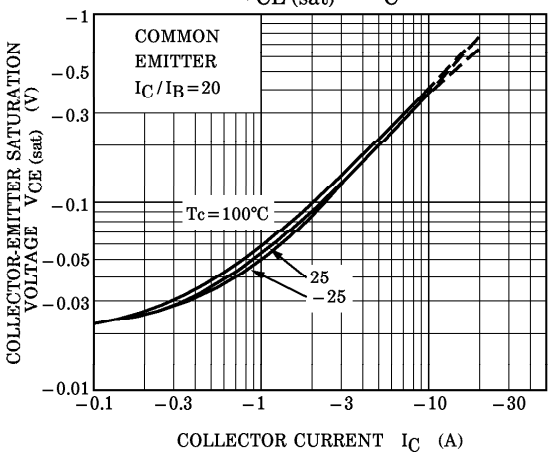
I_C – V_{BE}



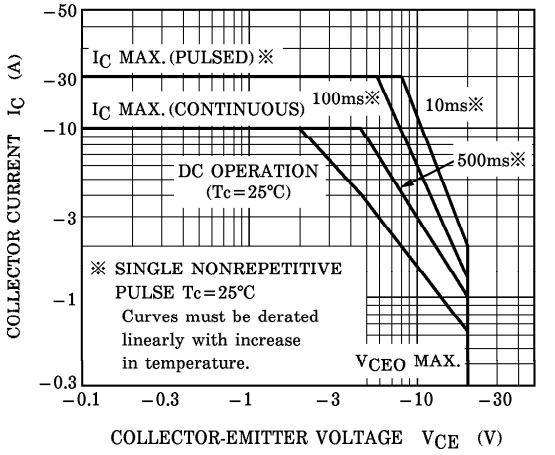
h_{FE} – I_C



$V_{CE\,(sat)}$ – I_C



SAFE OPERATING AREA



P_C – Ta