

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC4116

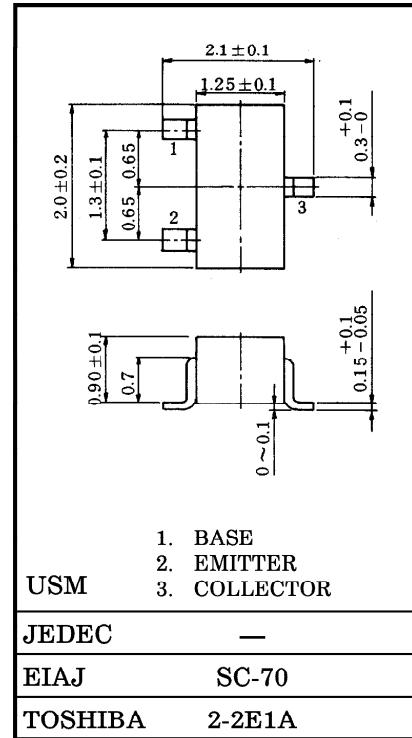
AUDIO FREQUENCY GENERAL PURPOSE AMPLIFIER APPLICATIONS.

Unit in mm

- High Voltage and High Current
: $V_{CEO} = 50V$, $I_C = 150mA$ (Max.)
- Excellent h_{FE} Linearity
: $h_{FE}(I_C = 0.1mA) / h_{FE}(I_C = 2mA) = 0.95$ (Typ.)
- High h_{FE} : $h_{FE} = 70 \sim 700$
- Low Noise : $NF = 1dB$ (Typ.), $10dB$ (Max.)
- Complementary to 2SA1586
- Small Package

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	150	mA
Base Current	I_B	30	mA
Collector Power Dissipation	P_C	100	mW
Junction Temperature	T_j	125	$^\circ C$
Storage Temperature Range	T_{stg}	-55~125	$^\circ C$



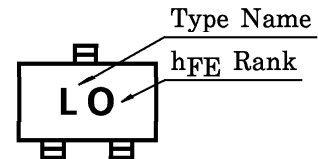
Weight : 0.006g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 60V, I_E = 0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	—	—	0.1	μA
DC Current Gain (Note)	h_{FE} (㉞)	$V_{CE} = 6V, I_C = 2mA$	70	—	700	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 100mA, I_B = 10mA$	—	0.1	0.25	V
Transition Frequency	f_T	$V_{CE} = 10V, I_C = 1mA$	80	—	—	MHz
Collector output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	2.0	3.5	pF
Noise Figure	NF	$V_{CE} = 6V, I_C = 0.1mA, f = 1kHz$ $R_g = 10k\Omega$	—	1.0	10	dB

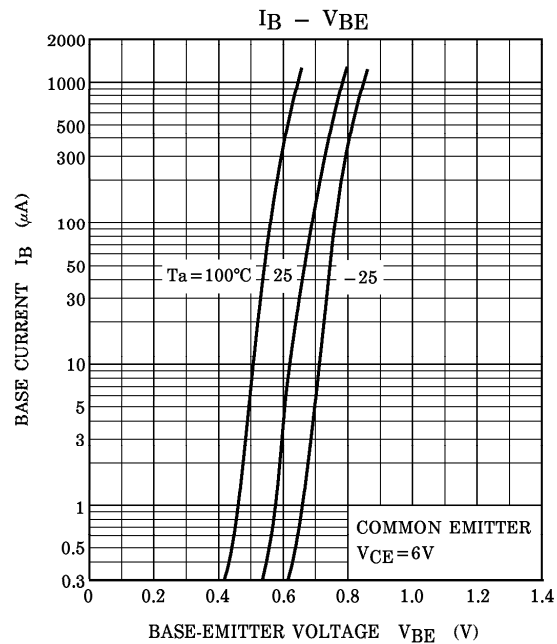
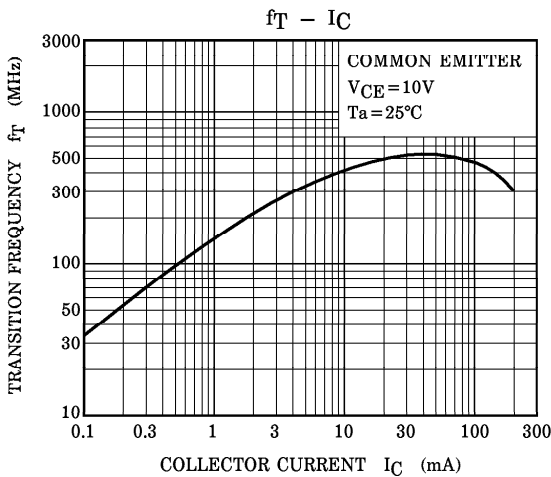
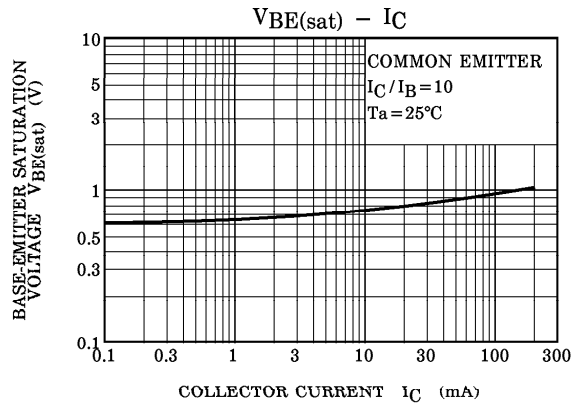
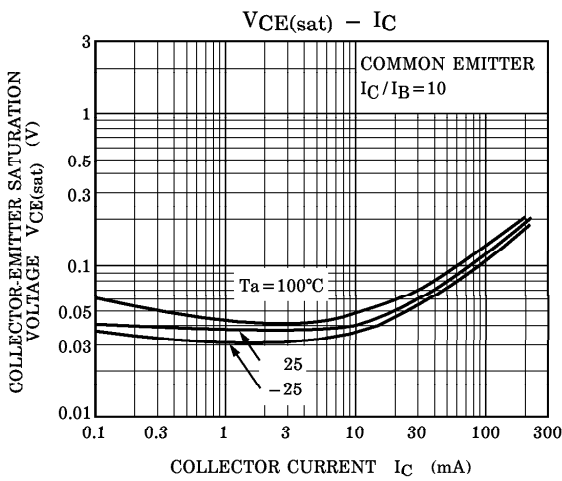
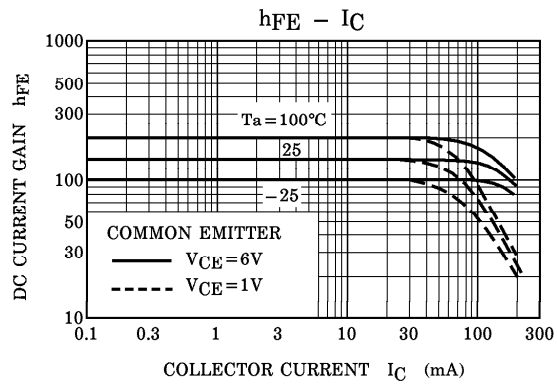
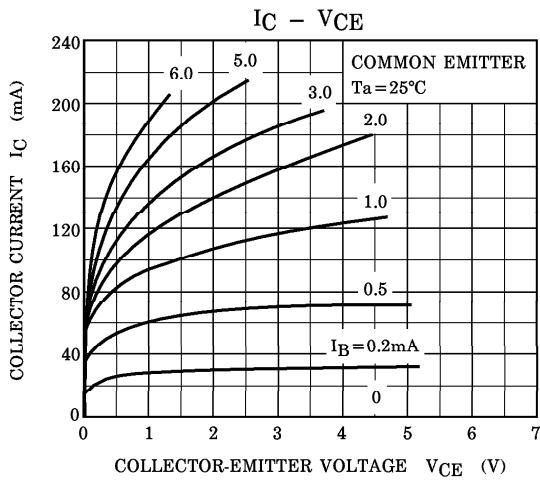
Note : h_{FE} Classification
 O (O) : 70~140, Y (Y) : 120~240
 GR (G) : 200~400, BL (L) : 350~700
 () Marking Symbol

Marking



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