

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

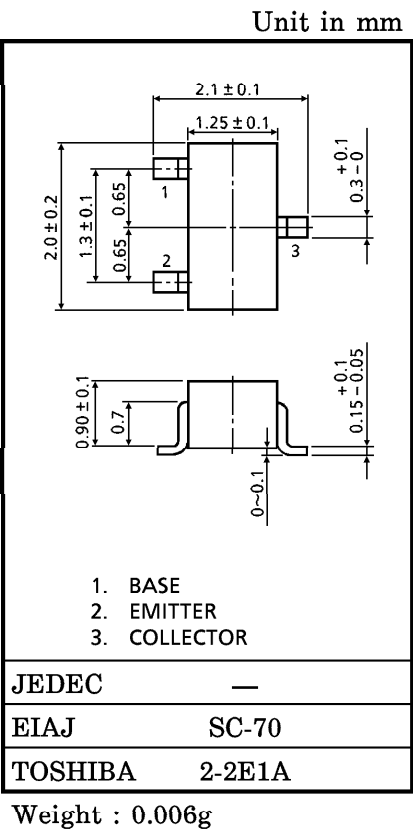
2SC4117

AUDIO FREQUENCY GENERAL PURPOSE AMPLIFIER APPLICATIONS

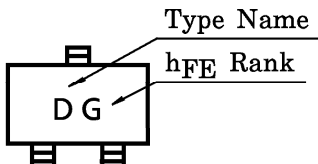
- High Voltage : $V_{CEO}=120V$
- Excellent h_{FE} Linearity : $h_{FE}(I_C=0.1mA)/h_{FE}(I_C=2mA)$
=0.95 (Typ.)
- High h_{FE} : $h_{FE}=200\sim700$
- Low Noise : $NF=1dB$ (Typ.), $10dB$ (Max.)
- Complementary to 2SA1587
- Small Package

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	120	V
Collector-Emitter Voltage	V_{CEO}	120	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Base Current	I_B	20	mA
Collector Power Dissipation	P_C	100	mW
Junction Temperature	T_j	125	$^{\circ}C$
Storage Temperature Range	T_{stg}	$-55\sim125$	$^{\circ}C$



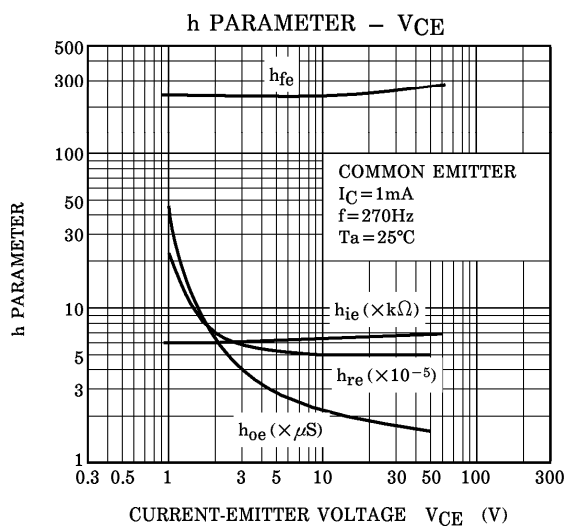
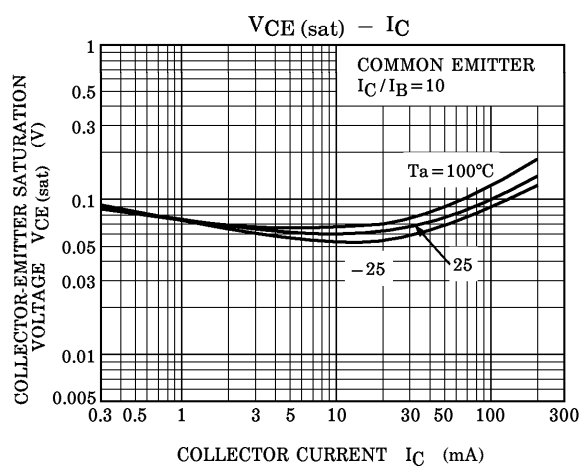
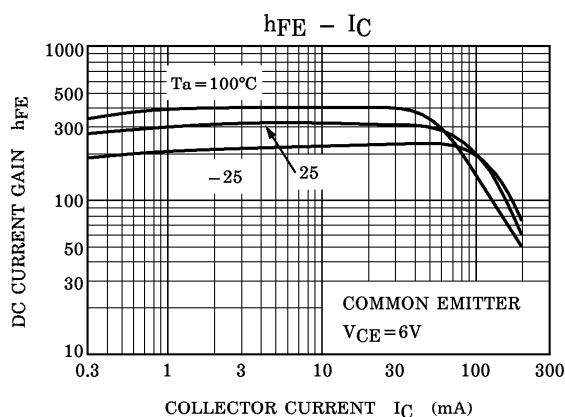
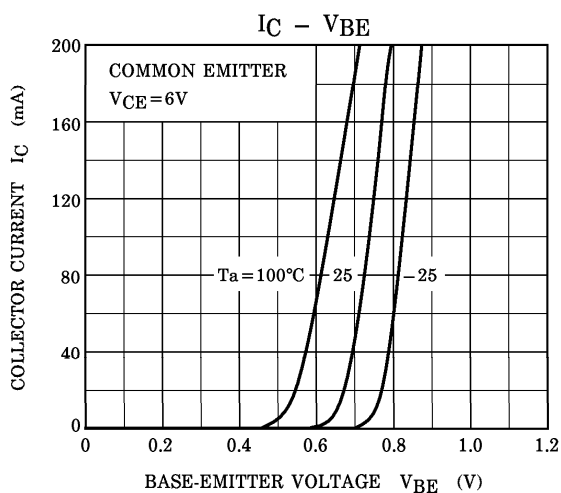
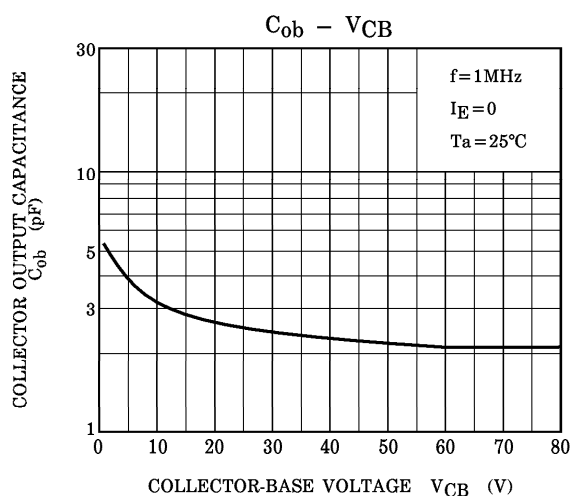
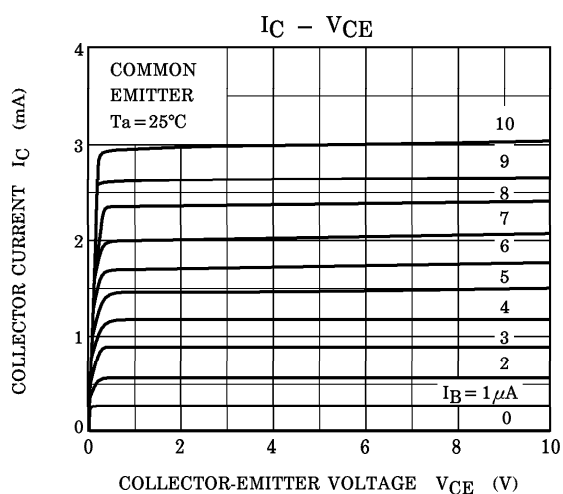
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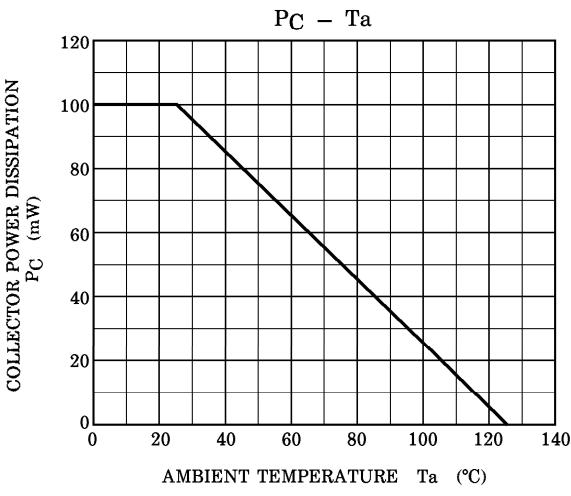
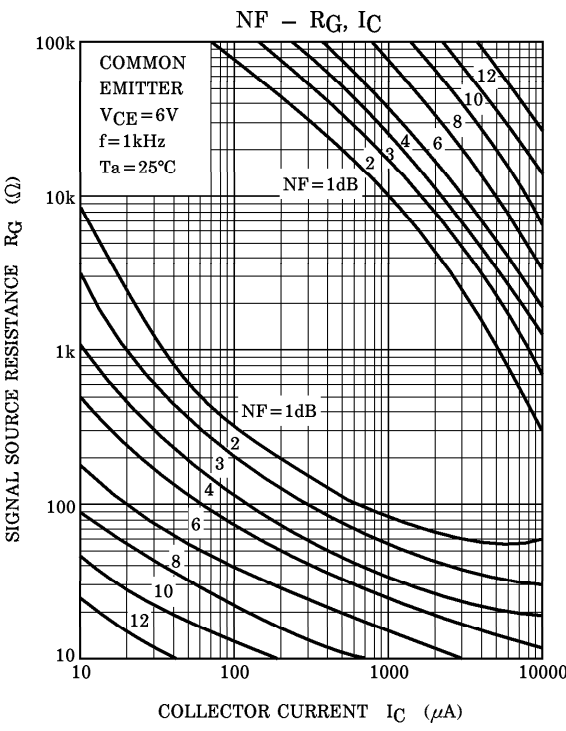
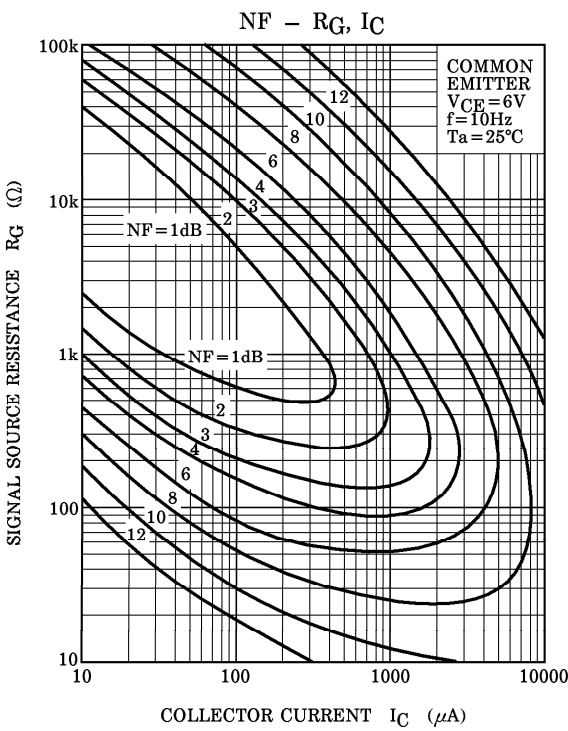
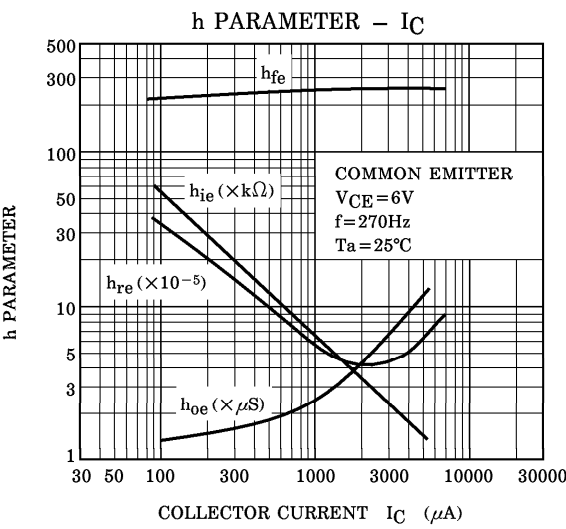


ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 120V, I_E = 0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	—	—	0.1	μA
DC Current Gain	h_{FE} (Note)	$V_{CE} = 6V, I_C = 2mA$	200	—	700	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 1mA$	—	—	0.3	V
Transition Frequency	f_T	$V_{CE} = 6V, I_C = 1mA$	—	100	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	3.0	—	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 GR (G) : 200~400, BL (L) : 350~700





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