

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

# 2SC4116

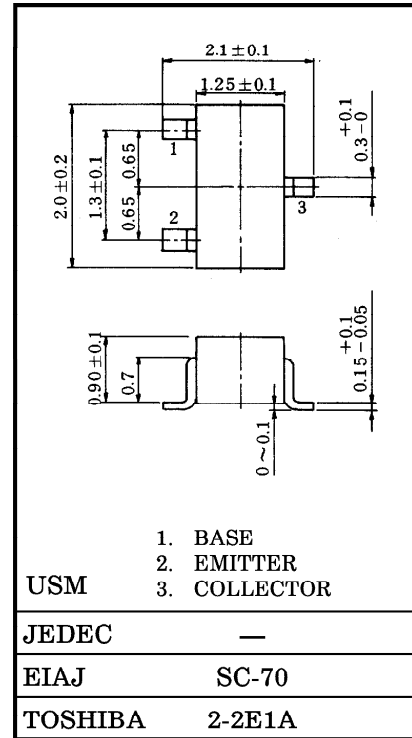
AUDIO FREQUENCY GENERAL PURPOSE AMPLIFIER APPLICATIONS.

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	$^\circ C$



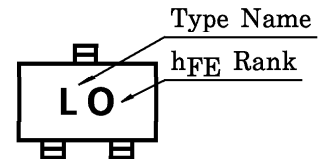
Weight : 0.006g

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	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5V$ , $I_C = 0$	—	—	0.1	$\mu A$
DC Current Gain (Note)	$h_{FE}$ (注)	$V_{CE} = 6V$ , $I_C = 2mA$	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

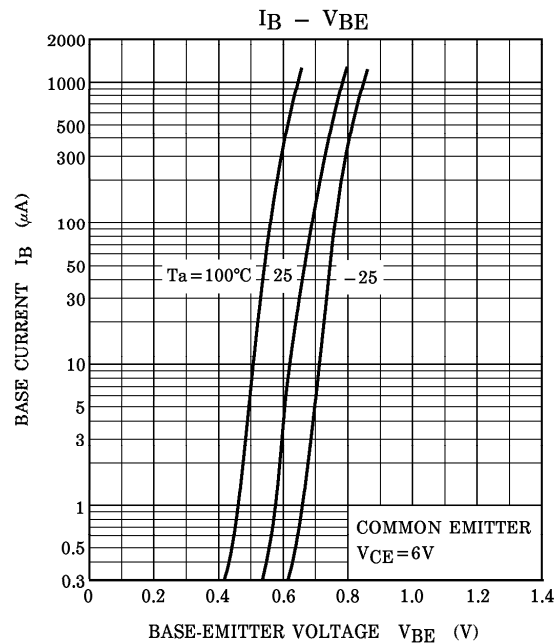
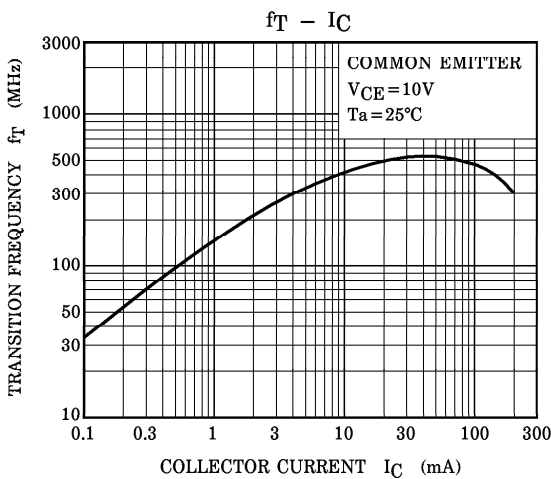
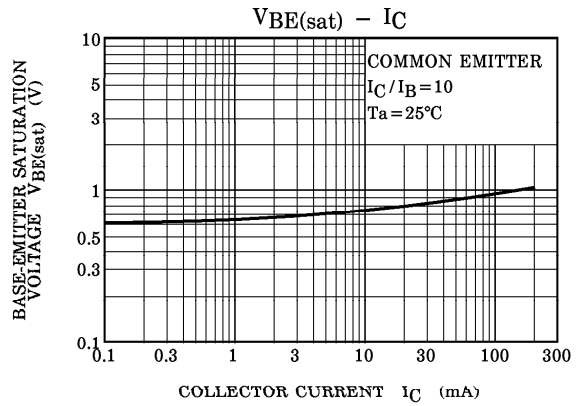
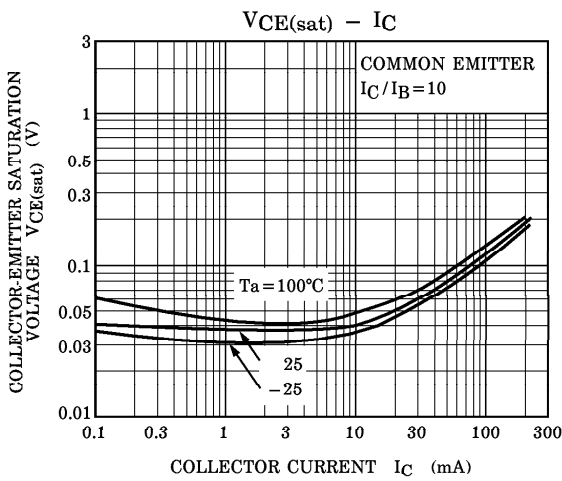
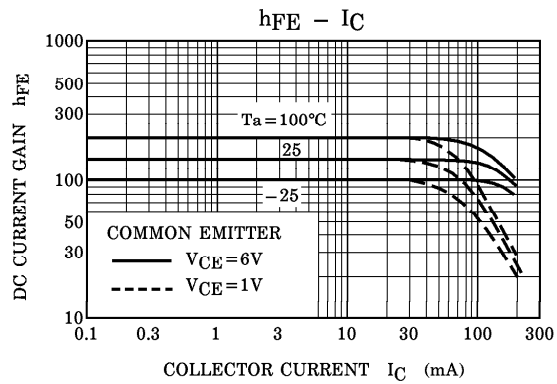
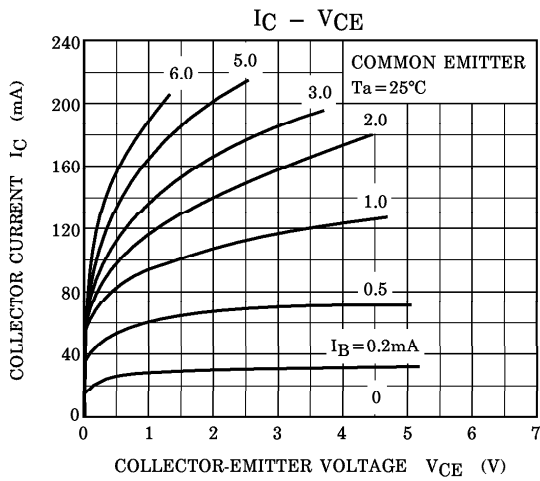
Note :  $h_{FE}$  Classification  
 O (O) : 70~140, Y (Y) : 120~240  
 GR (G) : 200~400, BL (L) : 350~700  
 ( ) Marking Symbol

Marking



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