TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC4118

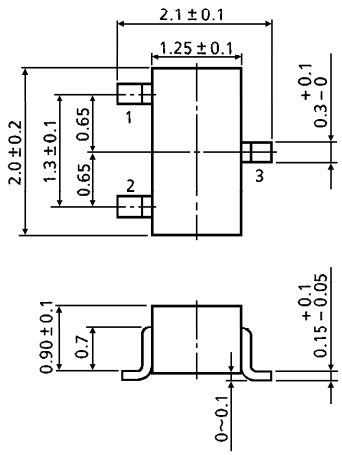
AUDIO FREQUENCY LOW POWER AMPLIFIER APPLICATIONS

DRIVER STAGE AMPLIFIER APPLICATIONS

SWITCHING APPLICATIONS

- Excellent h_{FE} Linearity : $h_{FE\,(2)}$ = 25 (Min.)
  (V_{CE} = 6V, I_C = 400mA)
- Complementary to 2SA1588

Unit in mm



1. BASE
2. EMITTER
3. COLLECTOR

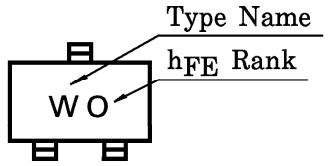
JEDEC	—
EIAJ	SC-70
TOSHIBA	2-2E1A

Weight : 0.006g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	35	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	mA
Base Current	I_B	50	mA
Collector Power Dissipation	P_C	100	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	−55~125	°C

MARKING

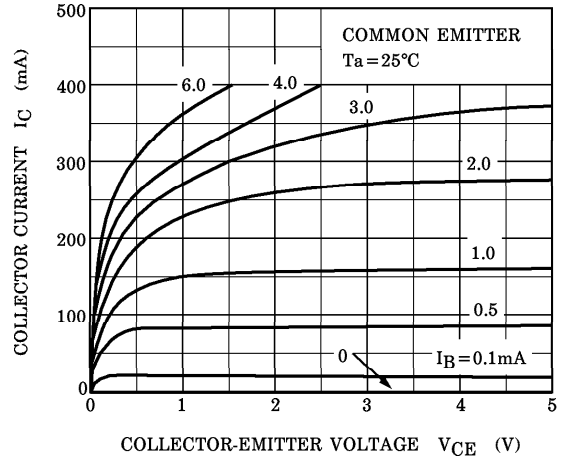


ELECTRICAL CHARACTERISTICS (Ta = 25°C)

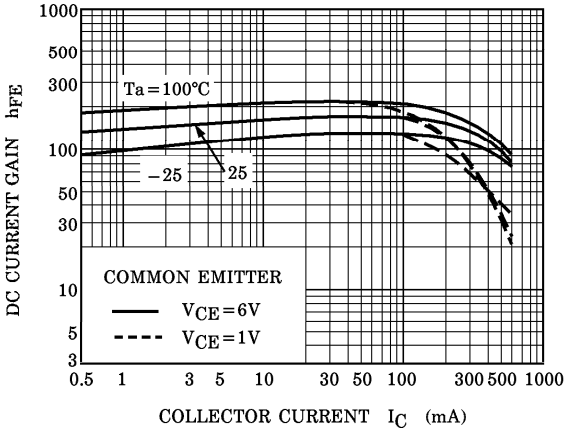
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = 35V, I_E = 0	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5V, I_C = 0	—	—	0.1	μA
DC Current Gain	h_{FE} (1) (Note)	V_{CE} = 1V, I_C = 100mA	70	—	240	
	h_{FE} (2) (Note)	V_{CE} = 6V, I_C = 400mA	25	—	—	
Collector-Emitter Saturation Voltage	$V_{CE\ (sat)}$	I_C = 100mA, I_B = 10mA	—	0.1	0.25	V
Base-Emitter VOltage	V_{BE}	V_{CE} = 1V, I_C = 100mA	—	0.8	1.0	V
Transition Frequency	f_T	V_{CE} = 6V, I_C = 20mA	—	300	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 6V, I_E = 0, f = 1MHz	—	7	—	pF

(Note) : $h_{FE\ (1)}$ Classification O : 70~140, Y : 120~240
$h_{FE\ (2)}$ Classification O : 25 (Min.), Y : 40 (Min.)

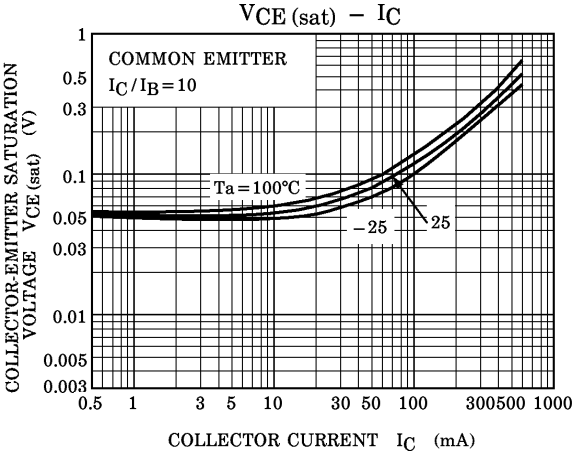
$I_C - V_{CE}$



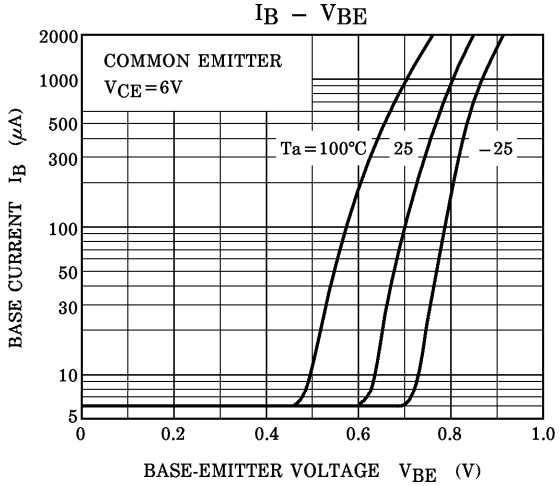
$h_{FE} - I_C$



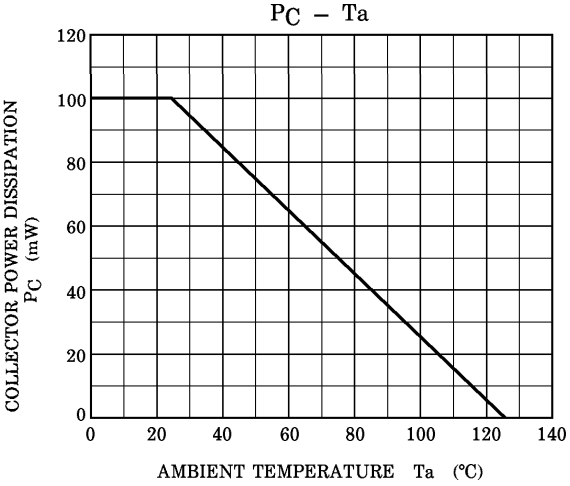
$V_{CE\,(sat)} - I_C$



$I_B - V_{BE}$



$P_C - Ta$



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