

TOSHIBA Transistor Silicon NPN Epitaxial Type

2SC5376FV

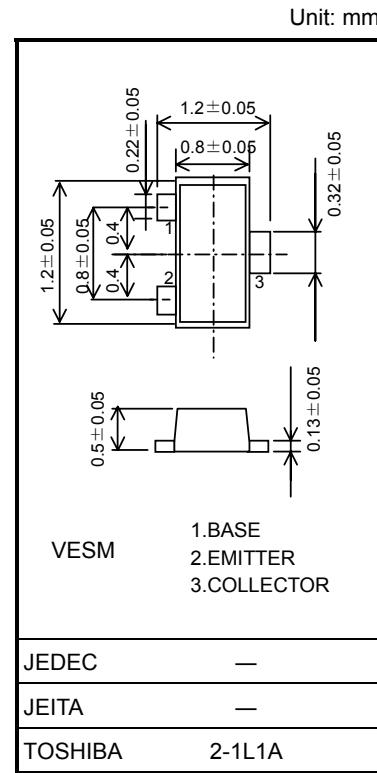
Audio Frequency General Purpose Amplifier Applications
 For Muting and Switching Applications

- Low Collector Saturation Voltage: $V_{CE}(\text{sat})$ (1) = 15 mV (typ.)
 $\text{@} I_C = 10 \text{ mA} / I_B = 0.5 \text{ mA}$
- High Collector Current: $I_C = 400 \text{ mA}$ (max)

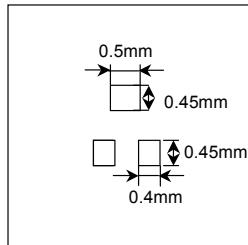
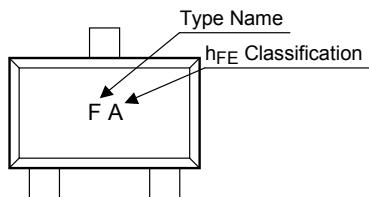
Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	15	V
Collector-emitter voltage	V_{CEO}	12	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	400	mA
Base current	I_B	50	mA
Collector power dissipation	P_C	150 *	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55~150	°C

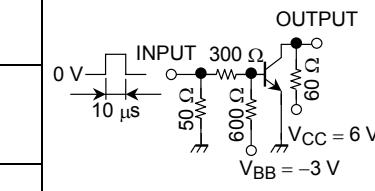
* : Mounted on FR4 board (25.4 mm × 25.4 mm × 1.6mm)



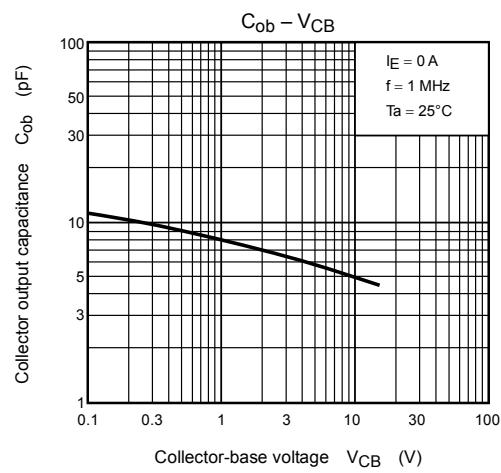
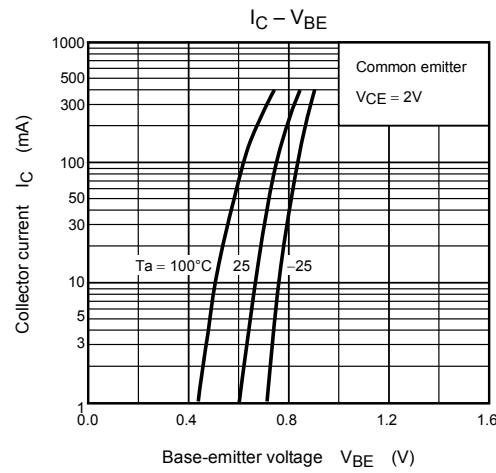
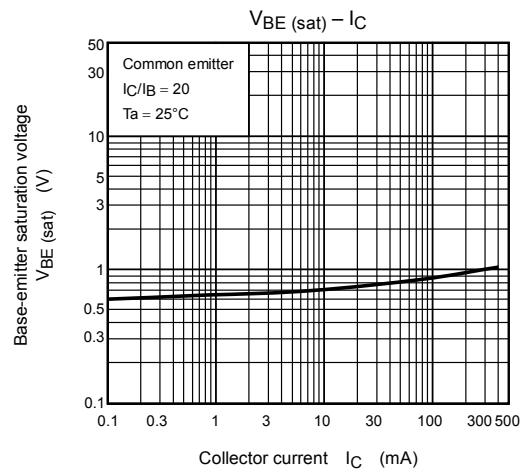
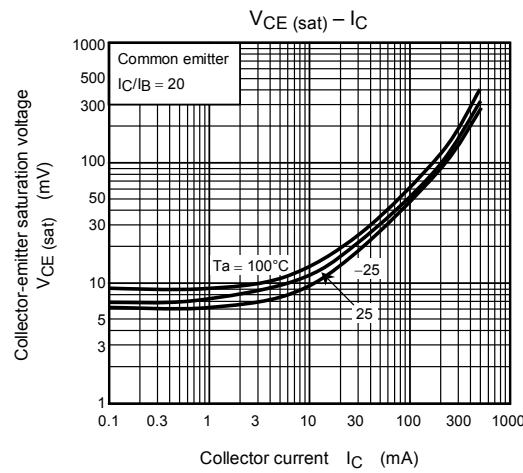
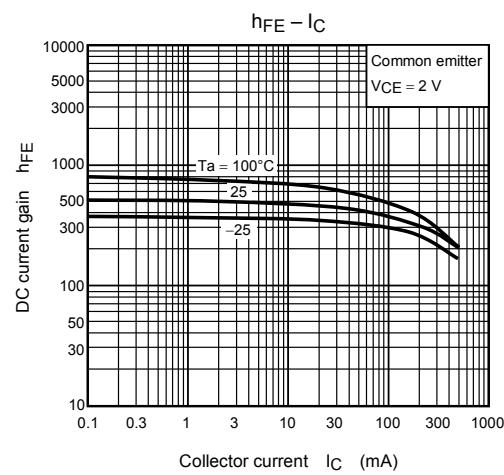
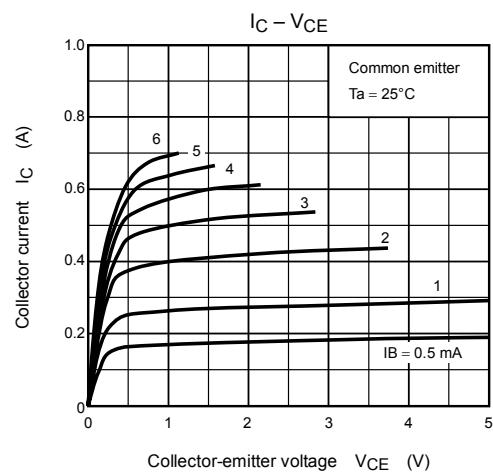
Weight: 0.0015g (typ.)

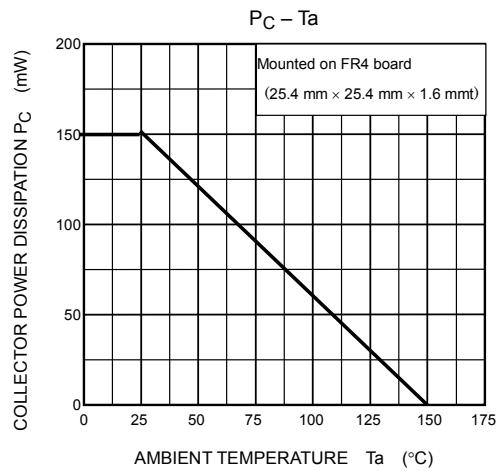
**Marking**

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I _{CBO}	V _{CB} = 15 V, I _E = 0	—	—	0.1	μA
Emitter cut-off current	I _{EB0}	V _{EB} = 5 V, I _C = 0	—	—	0.1	μA
DC current gain (Note)	h _{FE}	V _{CE} = 2 V, I _C = 10 mA	300	—	1000	
Collector-emitter saturation voltage	V _{CE} (sat) (1)	I _C = 10 mA, I _B = 0.5 mA	—	15	30	mV
	V _{CE} (sat) (2)	I _C = 200 mA, I _B = 10 mA	—	110	250	mV
Base-emitter voltage	V _{BE} (sat)	I _C = 200 mA, I _B = 10 mA	—	0.87	1.2	V
Transition frequency	f _T	V _{CE} = 2 V, I _C = 10 mA	80	130	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	4.2	—	pF
Collector-emitter on resistance	R _{on}	I _B = 1 mA, V _{in} = 1 V _{rms} , f = 1 kHz	—	0.9	—	Ω
Switching time	Turn-on time t _{on}	 Duty Cycle ≤ 2% IB1 = -IB2 = 5 mA	—	85	—	ns
	Storage time t _{stg}		—	170	—	ns
	Fall time t _f		—	40	—	ns

Note: h_{FE} Classification A: 300 ~ 600, B: 500 ~ 1000





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