

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC4738FV

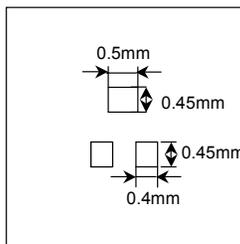
Audio Frequency General Purpose Amplifier Applications

- High Voltage: $V_{CE0} = 50\text{ V}$
- High Current: $I_C = 150\text{ mA (max)}$
- High h_{FE} : $h_{FE} = 120 \sim 400$
- Excellent h_{FE} Linearity
: $h_{FE} (I_C = 0.1\text{ mA})/h_{FE} (I_C = 2\text{ mA}) = 0.95\text{ (typ.)}$
- Complementary to 2SA1832FV

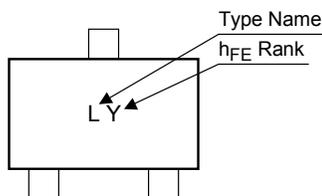
Maximum Ratings ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	60	V
Collector-emitter voltage	V_{CE0}	50	V
Emitter-base voltage	V_{EB0}	5	V
Collector current	I_C	150	mA
Base current	I_B	30	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 ~ 150	$^\circ\text{C}$

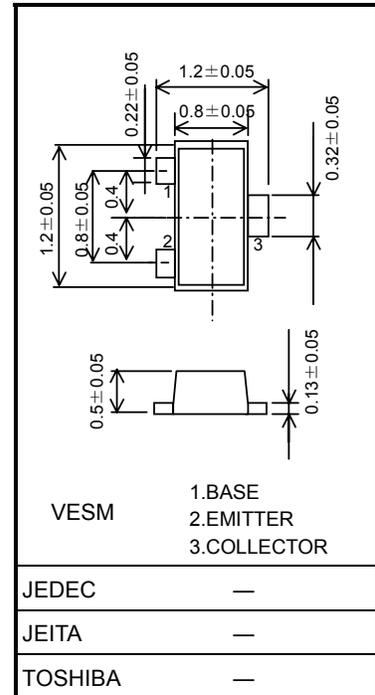
* : Mounted on FR4 board (25.4 mm × 25.4 mm × 1.6mmt)



Marking



Unit: mm

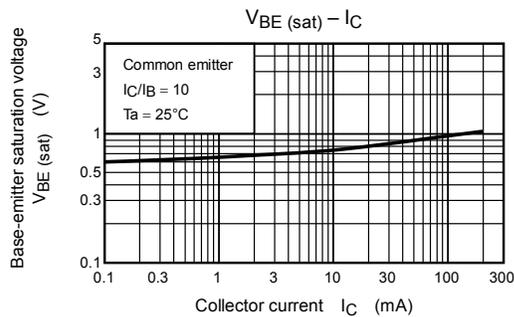
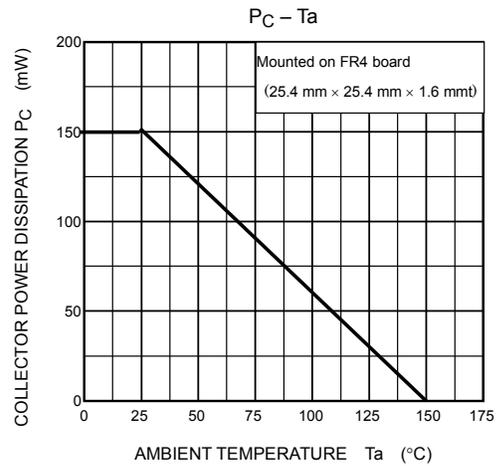
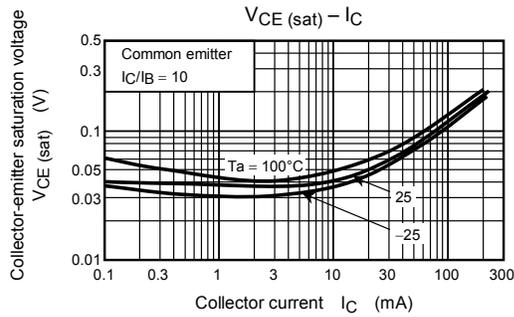
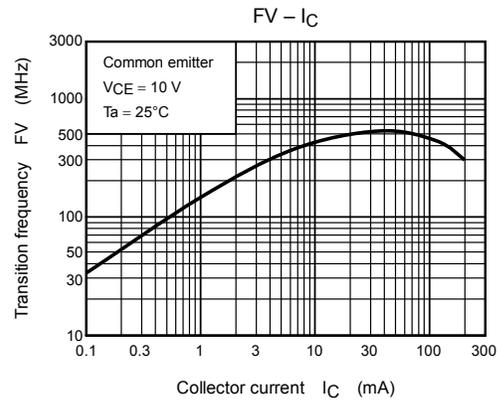
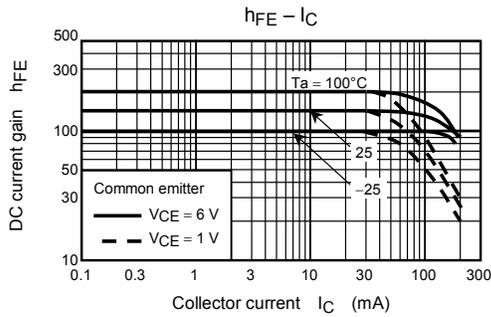
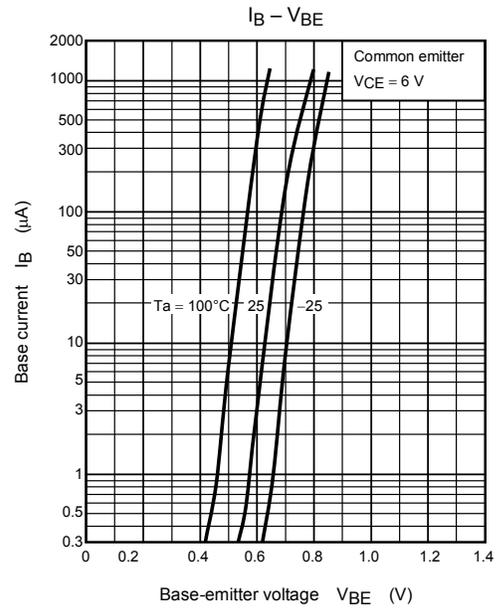
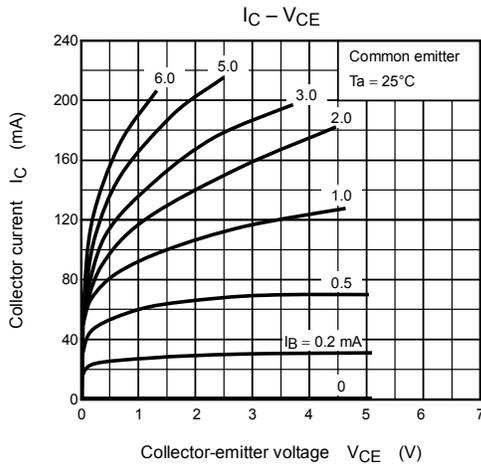


Weight: 0.0015g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 60\text{ V}, I_E = 0$	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	0.1	μA
DC current gain	h_{FE} (Note)	$V_{CE} = 6\text{ V}, I_C = 2\text{ mA}$	120	—	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{ mA}, I_B = 10\text{ mA}$	—	0.1	0.25	V
Transition frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 1\text{ mA}$	80	—	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	2.0	—	pF

Note: h_{FE} Classification Y (Y): 120 ~ 240, GR (G): 200 ~ 400
 () Marking symbol



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