

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC2712

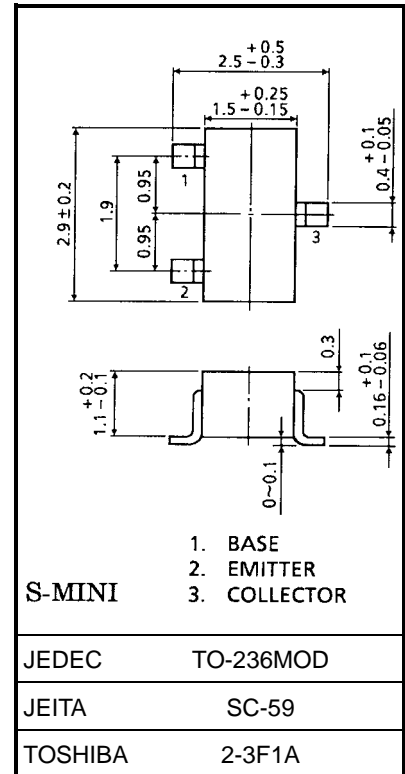
Audio Frequency General Purpose Amplifier Applications

- High voltage and high current: $V_{CEO} = 50\text{ V}$, $I_C = 150\text{ mA}$ (max)
- Excellent h_{FE} linearity: $h_{FE}(I_C = 0.1\text{ mA}) / h_{FE}(I_C = 2\text{ mA}) = 0.95$ (typ.)
- High h_{FE} : $h_{FE} = 70 \sim 700$
- Low noise: $NF = 1\text{ dB}$ (typ.), 10 dB (max)
- Complementary to 2SA1162
- Small package

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

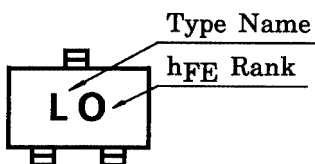
Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	150	mA
Base current	I_B	30	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~125	$^\circ\text{C}$

Unit: mm



Weight: 0.012 g (typ.)

Marking

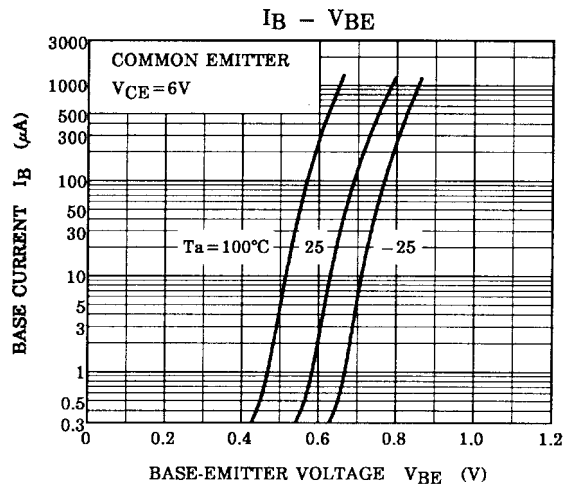
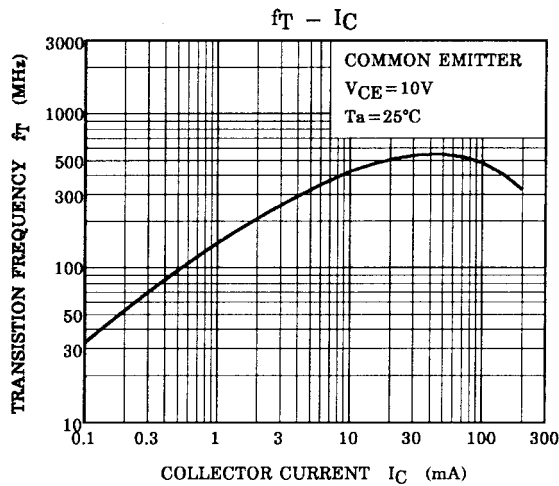
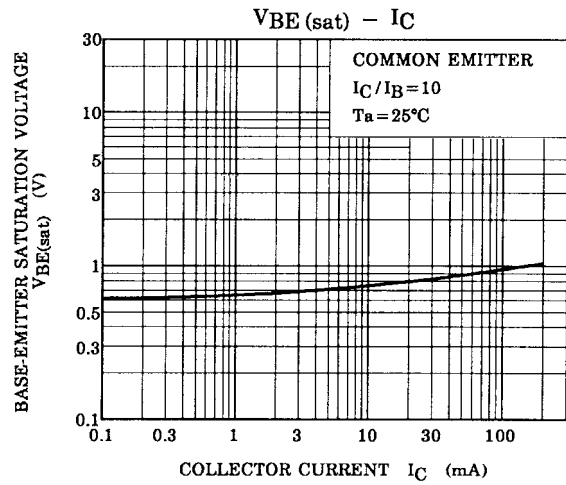
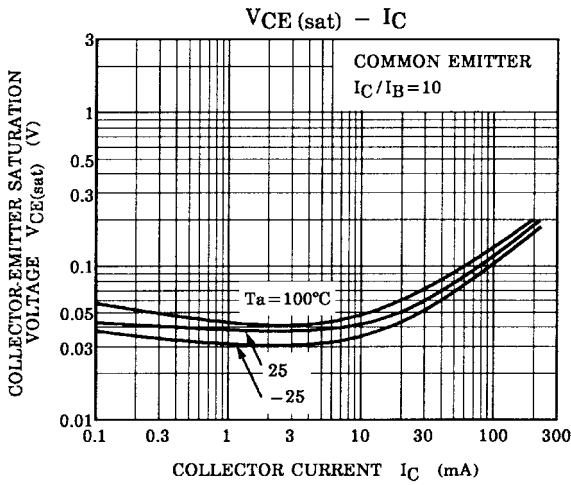
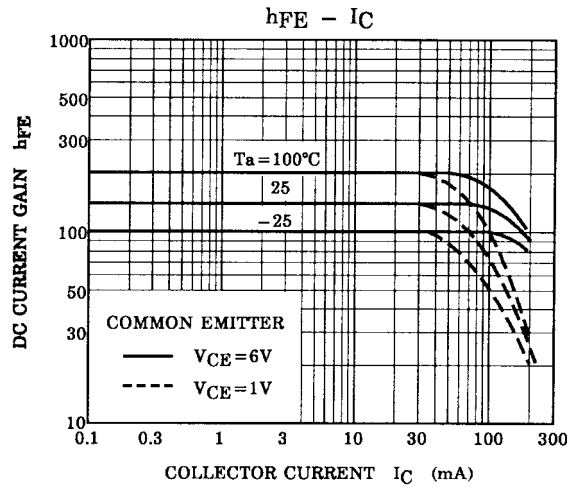
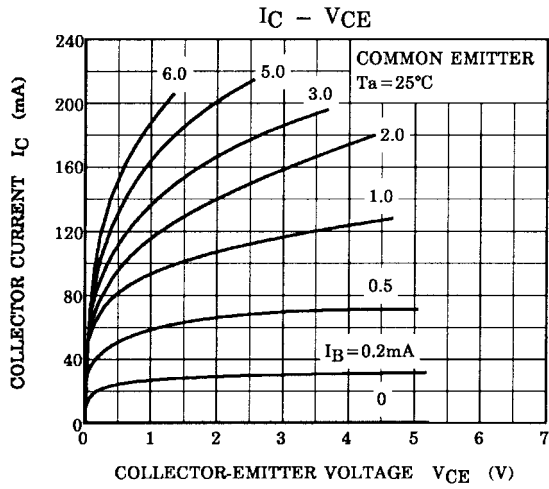


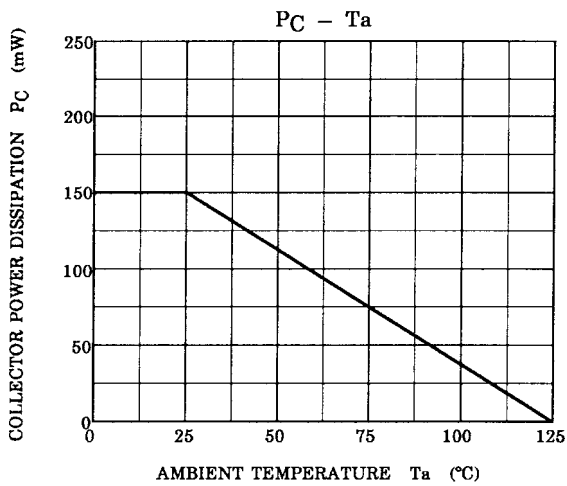
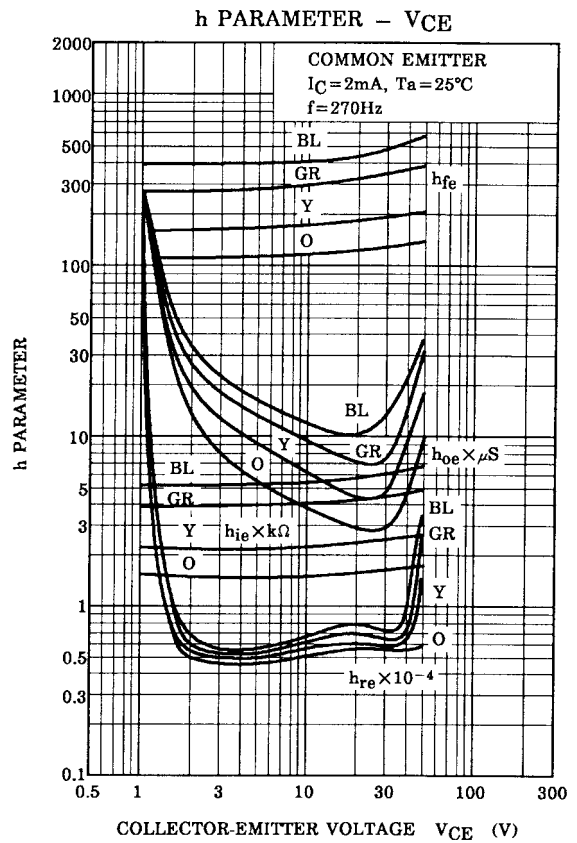
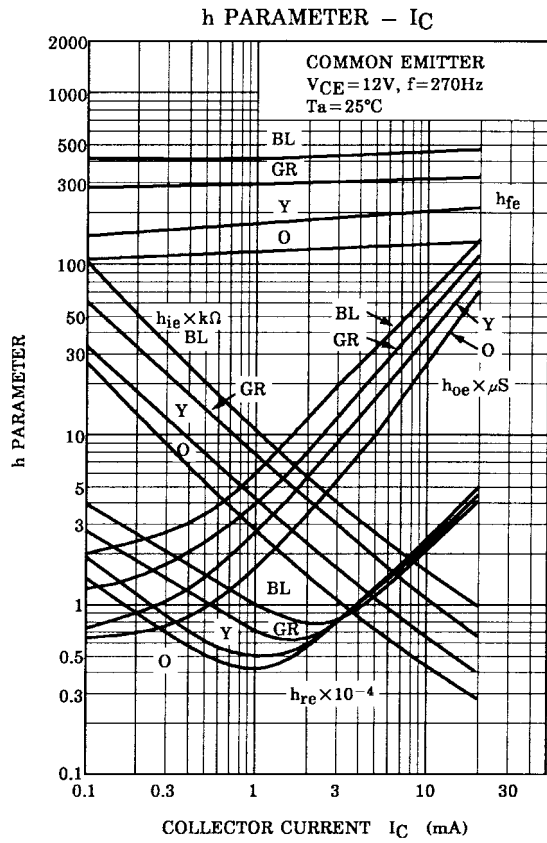
Electrical Characteristics (Ta = 25°C)

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)	$V_{CE} = 6 \text{ V}, I_C = 2 \text{ mA}$	70	—	700	
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	3.5	pF
Noise figure	NF	$V_{CE} = 6 \text{ V}, I_C = 0.1 \text{ mA}, f = 1 \text{ kHz},$ $R_g = 10 \text{ k}\Omega$	—	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





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