Unit: mm

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC2712

Audio Frequency General Purpose Amplifier Applications

High voltage and high current: VCEO = 50 V, IC = 150 mA (max)

• Excellent hFE linearity: hFE (I $_{\rm C}$ = 0.1 mA)/ hFE (I $_{\rm C}$ = 2 mA) = 0.95 (typ.)

• High hFE: hFE = 70 to 700

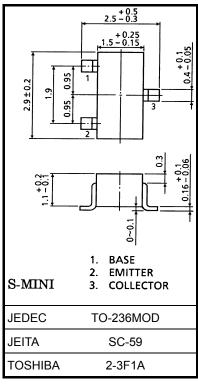
• Low noise: NF = 1dB (typ.), 10dB (max)

• Complementary to 2SA1162

· Small package

Absolute Maximum Ratings (Ta = 25°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	IC	150	mA
Base current	ΙΒ	30	mA
Collector power dissipation	PC	150	mW
Junction temperature	Tj	125	°C
Storage temperature range	T _{stg}	-55 to 125	°C



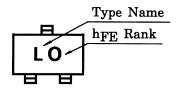
Weight: 0.012 g (typ.)

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook

("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Marking



Electrical Characteristics (Ta = 25°C)

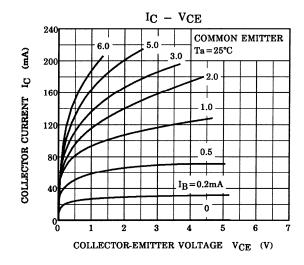
TOSHIBA

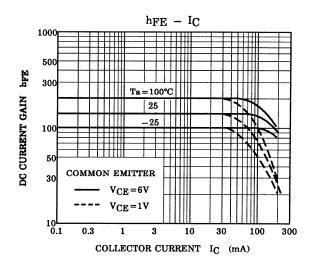
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I _{CBO}	$V_{CB} = 60 \text{ V}, I_{E} = 0$	_	_	0.1	μА
Emitter cut-off current	I _{EBO}	V _{EB} = 5 V, I _C = 0	_	_	0.1	μА
DC current gain	h _{FE} (Note)	V _{CE} = 6 V, I _C = 2 mA	70	_	700	
Collector-emitter saturation voltage	V _{CE} (sat)	I _C = 100 mA, I _B = 10 mA	_	0.1	0.25	V
Transition frequency	f _T	V _{CE} = 10 V, I _C = 1 mA	80	_	_	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 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

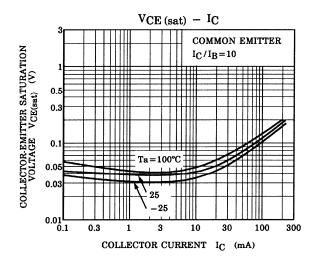
Note: h_{FE} classification O (O): 70 to 140, Y (Y): 120 to 240, GR (G): 200 to 400, BL (L): 350 to 700

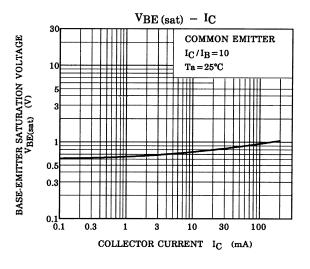
() marking symbol

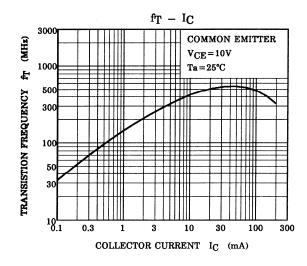
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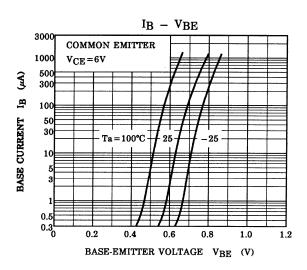


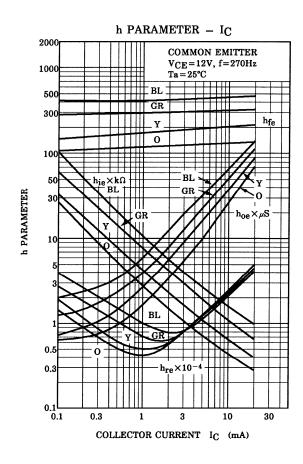


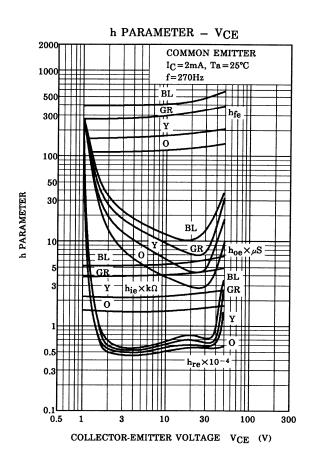


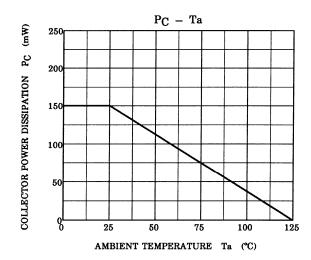












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