

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

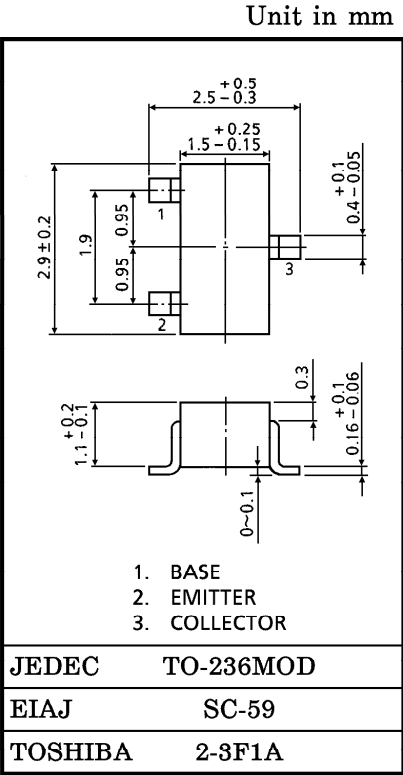
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AUDIO FREQUENCY AMPLIFIER APPLICATIONS.
DRIVER STAGE FOR LED LAMP APPLICATIONS.
TEMPERATURE COMPENSATION APPLICATIONS.

- High h_{FE} : $h_{FE}(1) = 5000$ (Min.) ($I_C = 10\text{mA}$)
 $h_{FE}(2) = 10000$ (Min.) ($I_C = 100\text{mA}$)

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	10	V
Collector Current	I_C	300	mA
Base Current	I_B	60	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55\sim 125$	$^\circ\text{C}$

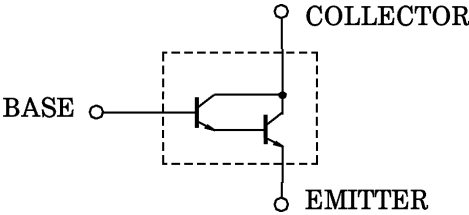


ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

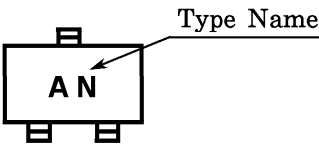
Weight : 0.012g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 8\text{V}, I_C = 0$	—	—	0.1	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = 5\text{V}, I_C = 10\text{mA}$	5000	—	—	
	$h_{FE}(2)$	$V_{CE} = 2\text{V}, I_C = 100\text{mA}$	10000	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 300\text{mA}, I_B = 0.3\text{mA}$	—	0.9	1.3	V
Base-Emitter Voltage	V_{BE}	$V_{CB} = 2\text{V}, I_C = 100\text{mA}$	—	1.25	1.6	V

EQUIVALENT CIRCUIT

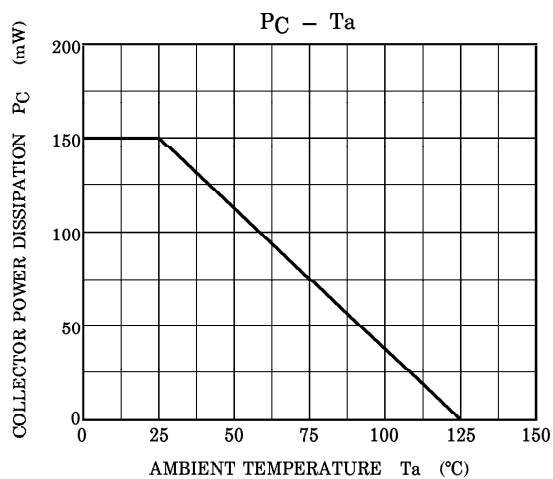
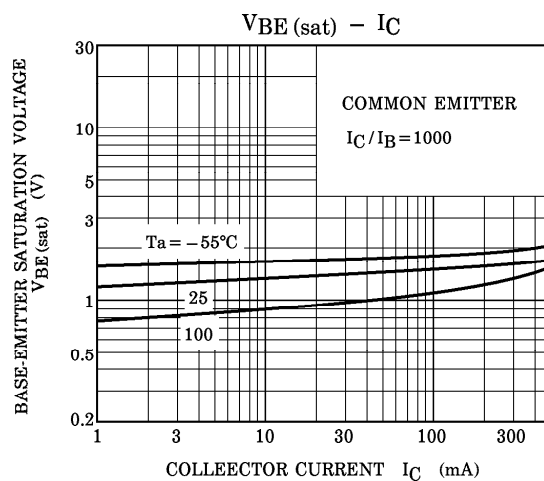
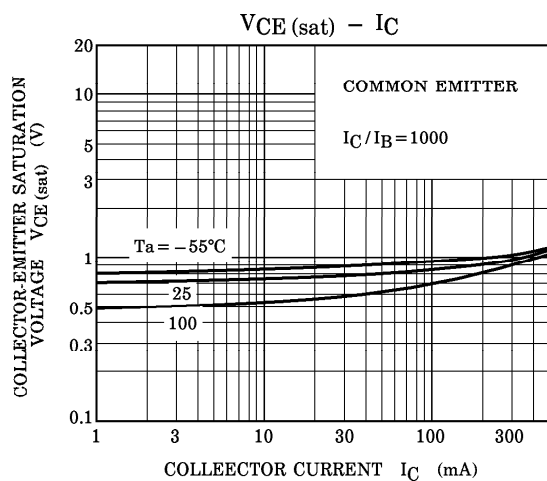
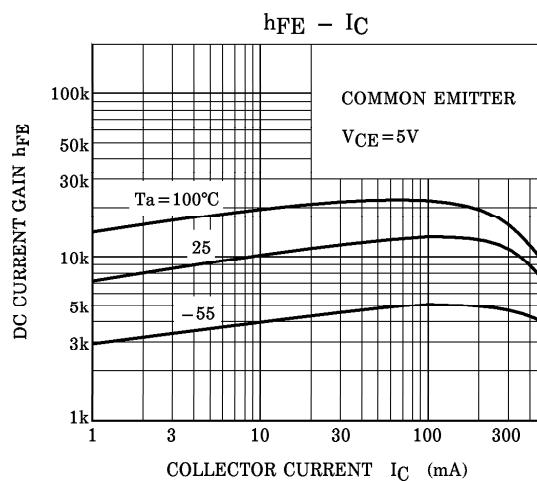
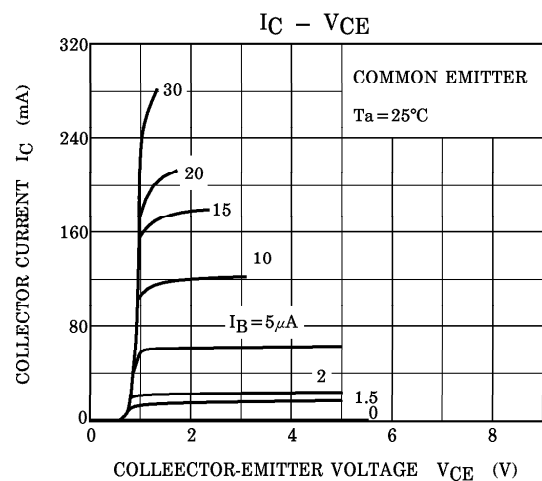


MARKING



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