

TOSHIBA Transistor Silicon PNP Triple Diffused (PCT process)

2SA1255

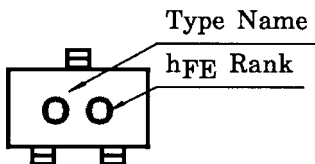
High Voltage Switching Applications

- High voltage: $V_{CBO} = -200\text{ V (min)}$
 $V_{CEO} = -200\text{ V (min)}$
- Small package
- Complementary to 2SC3138

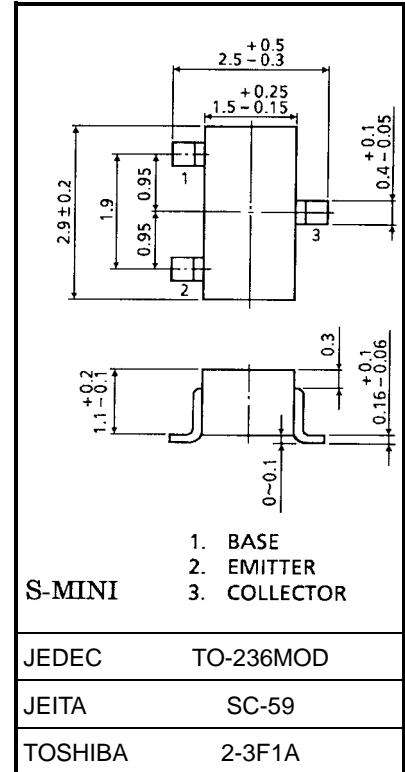
Maximum Ratings ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-200	V
Collector-emitter voltage	V_{CEO}	-200	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-50	mA
Base current	I_B	-20	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~125	$^\circ\text{C}$

Marking



Unit: mm

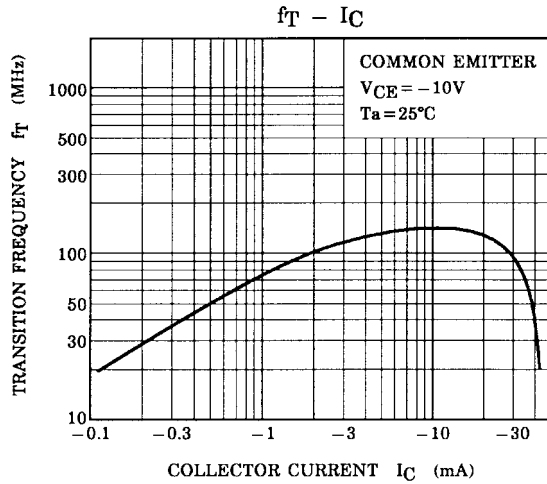
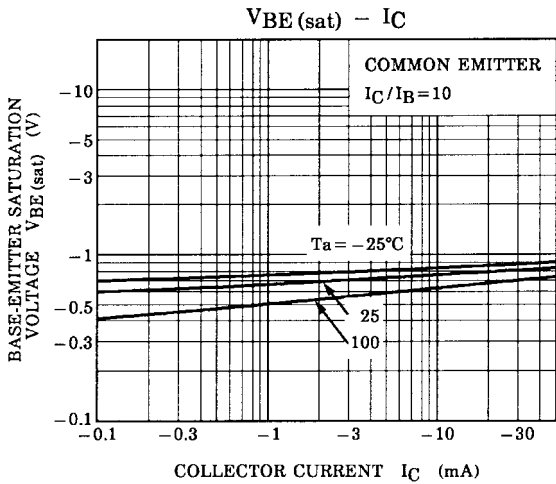
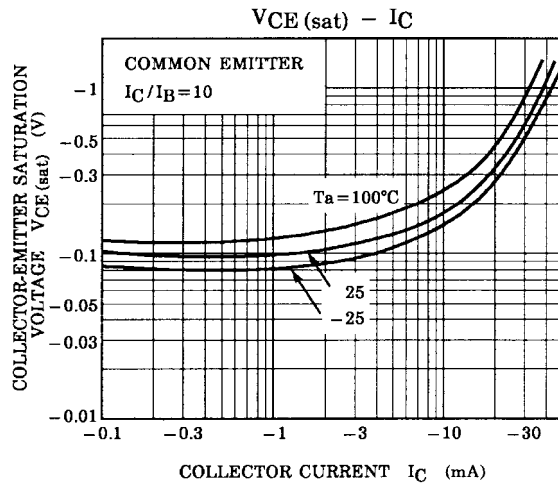
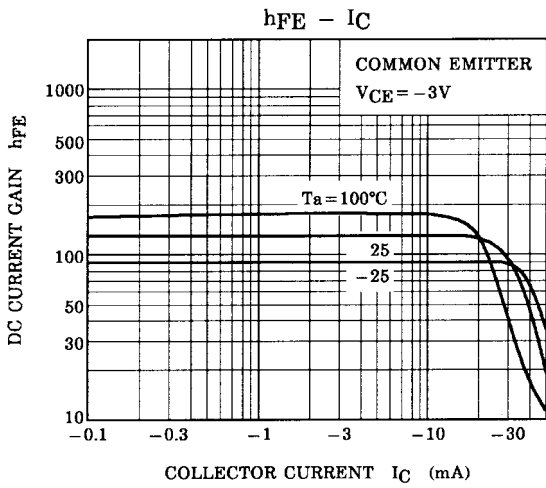
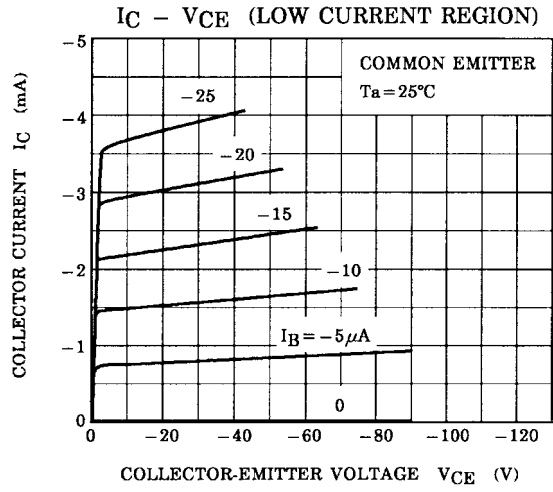
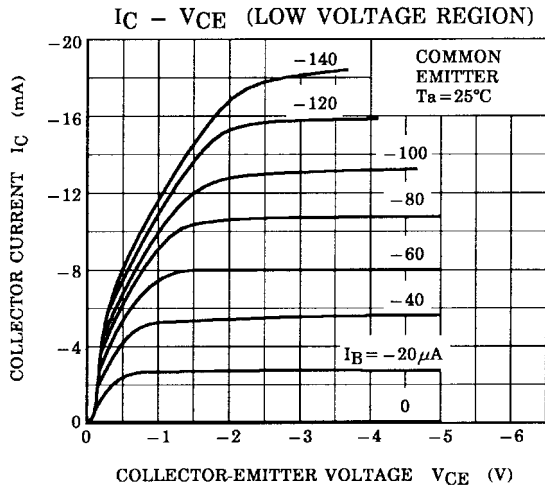


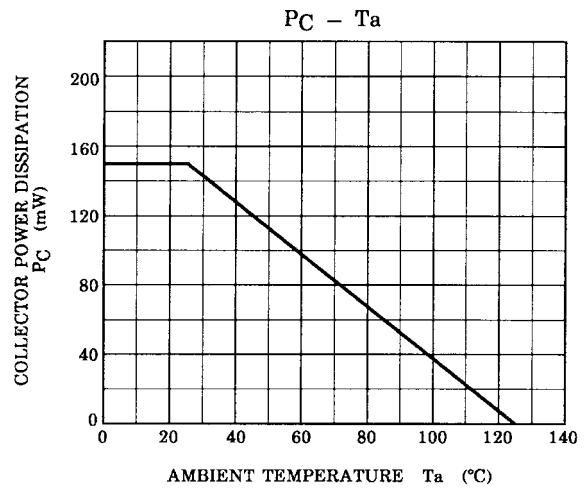
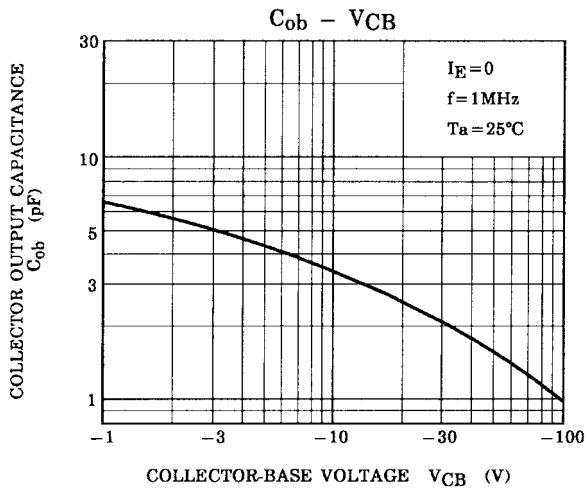
Weight: 0.012 g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	$V_{CB} = -200\text{ V}, I_E = 0$	—	—	-0.1	μA
Emitter cut-off current		I_{EBO}	$V_{EB} = -5\text{ V}, I_C = 0$	—	—	-0.1	μA
Collector-base breakdown voltage		$V_{(BR) CBO}$	$I_C = -0.1\text{ mA}, I_E = 0$	-200	—	—	V
Collector-emitter breakdown voltage		$V_{(BR) CEO}$	$I_C = -1\text{ mA}, I_B = 0$	-200	—	—	V
DC current gain		h_{FE} (Note)	$V_{CE} = -3\text{ V}, I_C = -10\text{ mA}$	70	—	240	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = -10\text{ mA}, I_B = -1\text{ mA}$	—	-0.2	-1	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = -10\text{ mA}, I_B = -1\text{ mA}$	—	-0.75	-1.5	V
Transition frequency		f_T	$V_{CE} = -10\text{ V}, I_C = -2\text{ mA}$	50	100	—	MHz
Collector output capacitance		C_{ob}	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	3	7	pF
Switching time	Turn-on time	t_{on}	$V_{CC} = -50\text{ V}, I_C = -6\text{ mA}$ $-I_{B1} = I_{B2} = 0.6\text{ mA}$ Pulse width = 5 μs Duty cycle $\leq 2\%$	—	0.3	—	μs
	Storage time	t_{stg}		—	2	—	
	Fall time	t_f		—	0.4	—	

Note: h_{FE} classification O: 70~140, Y: 120~240





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