

TOSHIBA TRANSISTOR   SILICON PNP TRIPLE DIFFUSED (PCT PROCESS)

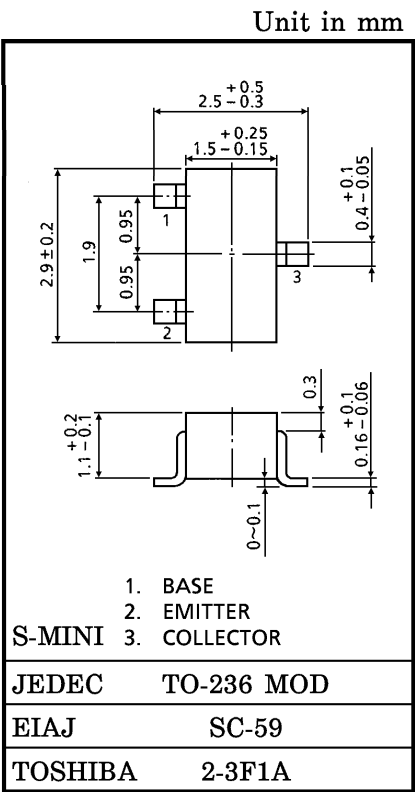
2SA1255

HIGH VOLTAGE SWITCHING APPLICATIONS

- High Voltage :  $V_{CBO} = -200V$  (Min.)  
 $V_{CEO} = -200V$  (Min.)
- Small Package
- Complementary to 2SC3138

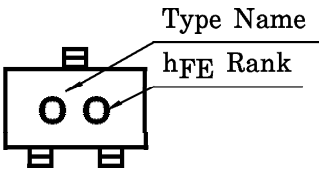
MAXIMUM RATINGS ( $T_a = 25^{\circ}C$ )

CHARACTERISTIC	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	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-55~125	$^{\circ}C$



Weight : 0.012g

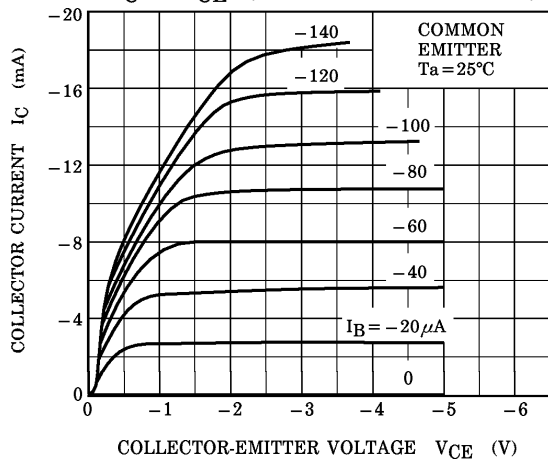
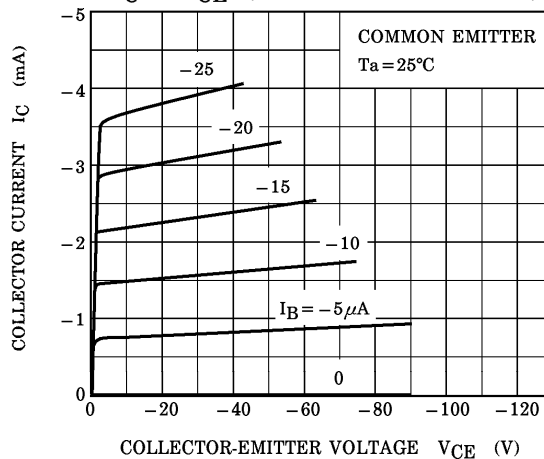
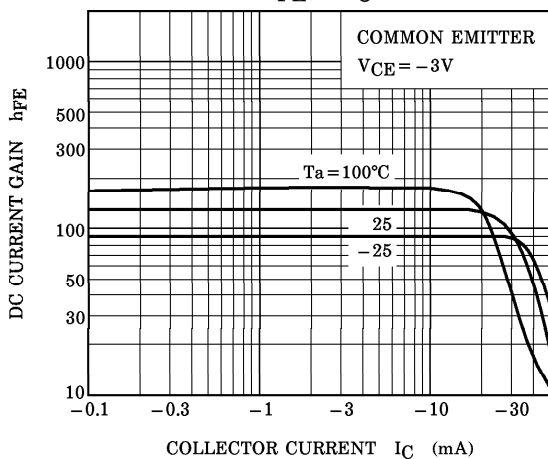
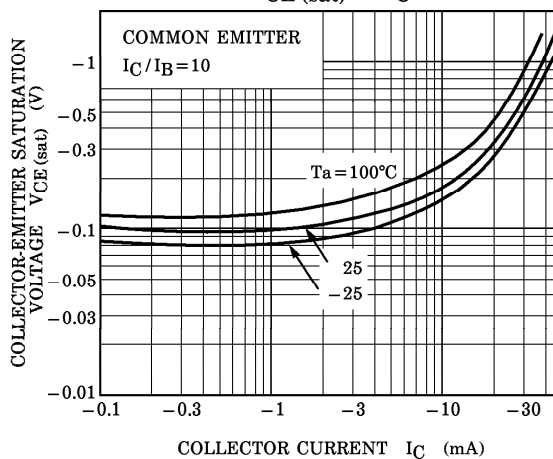
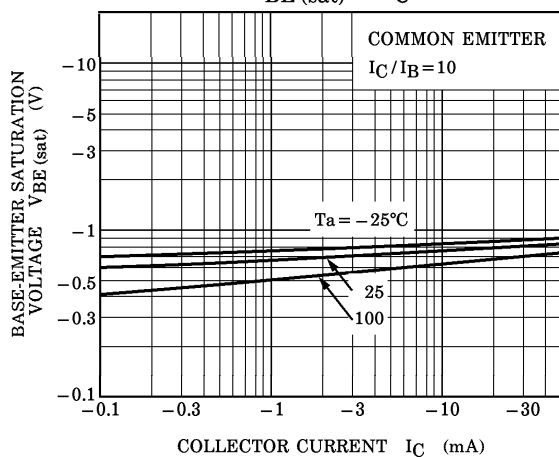
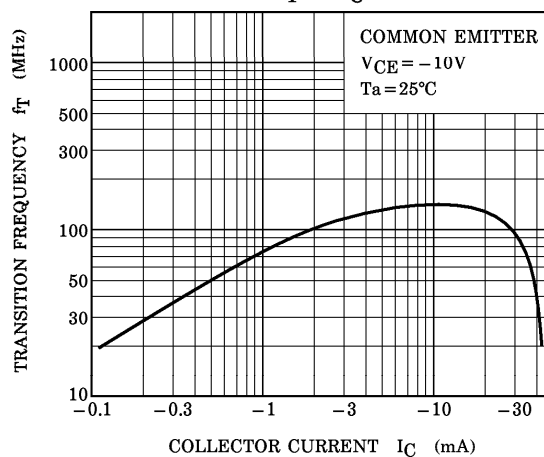
Marking

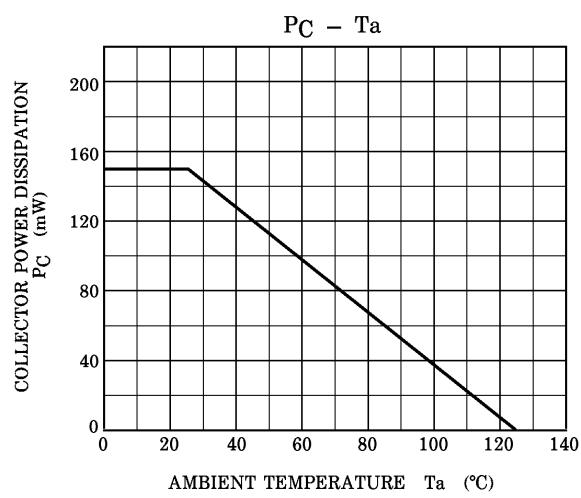
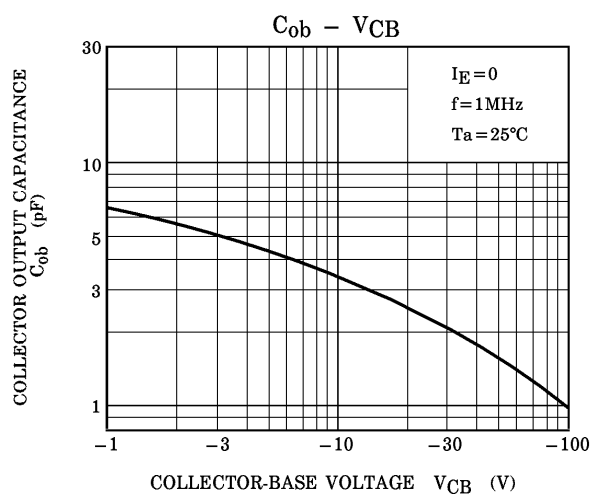


## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB} = -200V, I_E = 0$	—	—	-0.1	$\mu A$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB} = -5V, I_C = 0$	—	—	-0.1	$\mu A$
Collector-Base Breakdown Voltage		$V_{(BR) CBO}$	$I_C = -0.1mA, I_E = 0$	-200	—	—	V
Collector-Emitter Breakdown Voltage		$V_{(BR) CEO}$	$I_C = -1mA, I_B = 0$	-200	—	—	V
DC Current Gain		$h_{FE}$ (Note)	$V_{CE} = -3V, I_C = -10mA$	70	—	240	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = -10mA, I_B = -1mA$	—	-0.2	-1	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = -10mA, I_B = -1mA$	—	-0.75	-1.5	V
Transition Frequency		$f_T$	$V_{CE} = -10V, I_C = -2mA$	50	100	—	MHz
Collector Output Capacitance		$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	3	7	pF
Switching Time	Turn-on Time	$t_{on}$	$V_{CC} = -50V, I_C = -6mA$ $-I_{B1} = I_{B2} = 0.6mA$ PULSE WIDTH = $5\mu s$ DUTY CYCLE $\leq 2\%$	—	0.3	—	$\mu s$
	Storage Time	$t_{stg}$		—	2	—	$\mu s$
	Fall Time	$t_f$		—	0.4	—	$\mu s$

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

$I_C - V_{CE}$  (LOW VOLTAGE REGION) $I_C - V_{CE}$  (LOW CURRENT REGION) $h_{FE} - I_C$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $f_T - I_C$ 



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