TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED (PCT PROCESS)

2SA1255

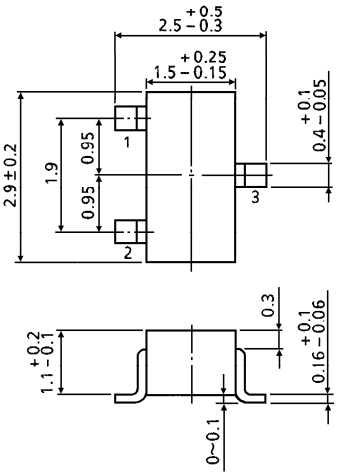
HIGH VOLTAGE SWITCHING APPLICATIONS

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

MAXIMUM RATINGS (Ta = 25°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	°C
Storage Temperature Range	T_{stg}	−55~125	°C

Unit in mm

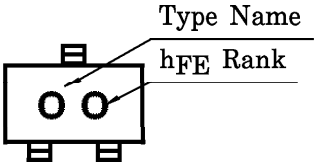


1. BASE
2. EMITTER
3. COLLECTOR

S-MINI	
JEDEC	TO-236 MOD
EIAJ	SC-59
TOSHIBA	2-3F1A

Weight : 0.012g

Marking



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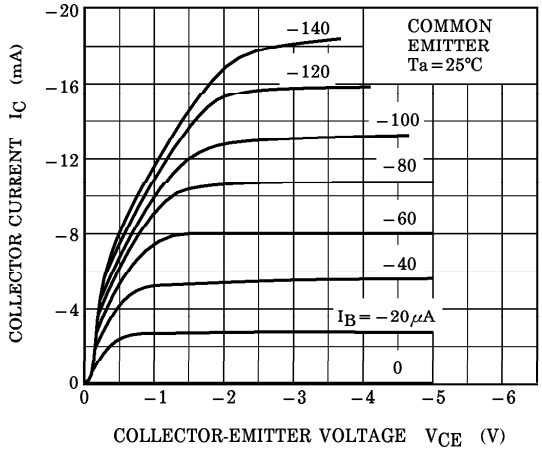
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

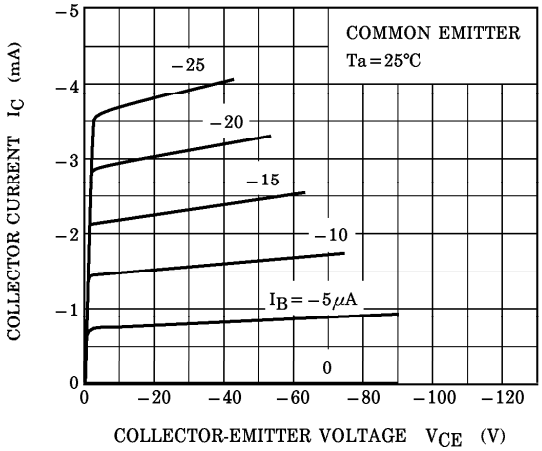
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -200V$, $I_E = 0$	—	—	−0.1	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -5V$, $I_C = 0$	—	—	−0.1	μA
Collector-Base Breakdown Voltage		$V_{(BR)\,CBO}$	$I_C = -0.1mA$, $I_E = 0$	−200	—	—	V
Collector-Emitter 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 = 5μs DUTY CYCLE ≦ 2%	—	0.3	—	μs
	Storage Time	t_{stg}		—	2	—	μs
	Fall Time	t_f		—	0.4	—	μs

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

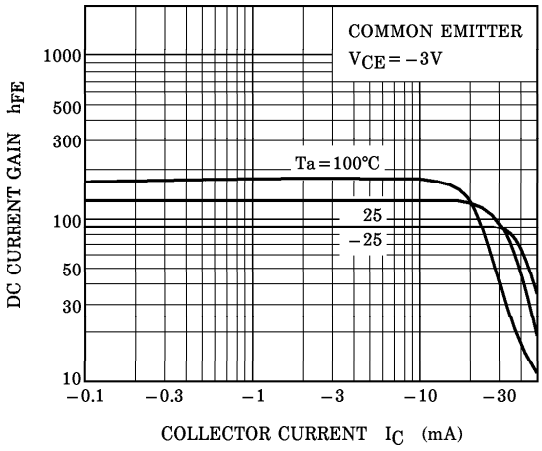
I_C – V_{CE} (LOW VOLTAGE REGION)



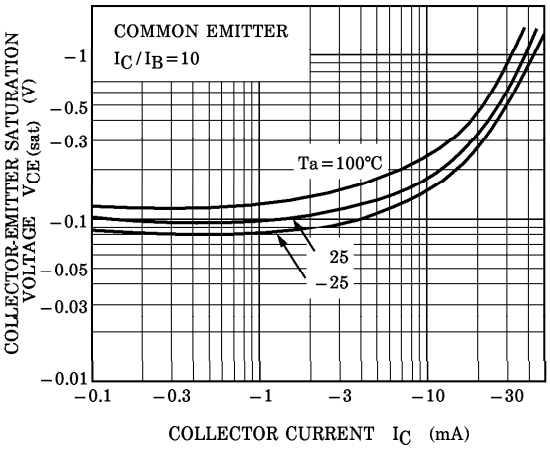
I_C – V_{CE} (LOW CURRENT REGION)



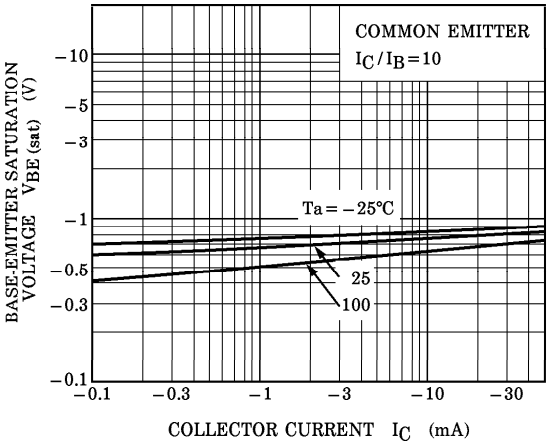
h_{FE} – I_C



$V_{CE\,(sat)}$ – I_C



$V_{BE\,(sat)}$ – I_C



f_T – I_C