TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE

2SA1923

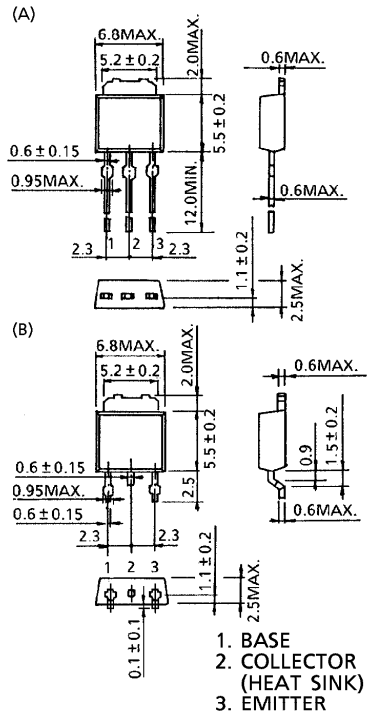
HIGH VOLTAGE SWITCHING APPLICATIONS

- High Voltage : $V_{CBO} = -400$ V
- Low Saturation Voltage : $V_{CE\ (sat)} = -1$ V (Max.) ($I_C = -100$ mA, $I_B = -10$ mA)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	−400	V
Collector-Emitter Voltage		V_{CEO}	−400	V
Emitter-Base Voltage		V_{EBO}	−7	V
Collector Current	DC	I_C	−0.5	A
	Pulse	I_{CP}	−1	
Base Current		I_B	−0.25	A
Collector Power Dissipation	Ta = 25°C	P_C	1	W
	Tc = 25°C		10	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

Unit in mm

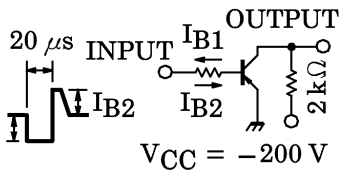


JEDEC	—
EIAJ	—
TOSHIBA	(A) 2-7B1A (B) 2-7B2A

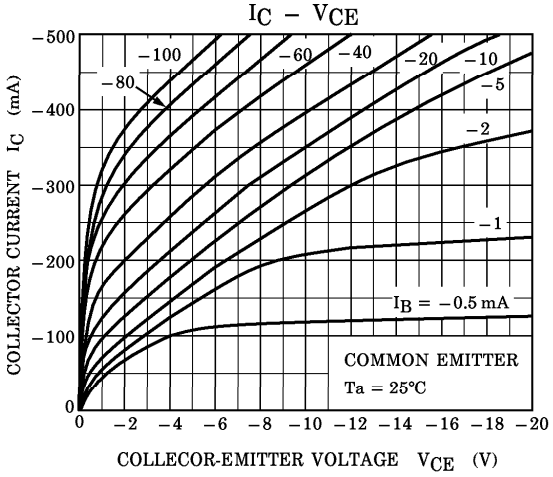
Weight : 0.36 g

961001EAA1

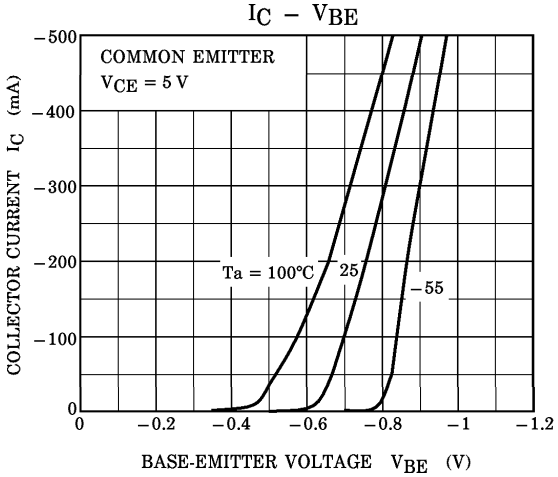
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -400$ V, $I_E = 0$	—	—	−10	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -7$ V, $I_C = 0$	—	—	−1	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = -10$ mA, $I_B = 0$	−400	—	—	V
DC Current Gain		$h_{FE(1)}$	$V_{CE} = -5$ V, $I_C = -20$ mA	140	—	450	
		$h_{FE(2)}$	$V_{CE} = -5$ V, $I_C = -100$ mA	140	—	400	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = -100$ mA, $I_B = -10$ mA	—	−0.4	−1.0	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = -100$ mA, $I_B = -10$ mA	—	−0.76	−0.9	V
Transition Frequency		f_T	$V_{CE} = -5$ V, $I_C = -50$ mA	—	35	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10$ V, $I_E = 0$, f = 1 MHz	—	18	—	pF
Switching Time	Turn-on Time	t_{on}		—	0.2	—	μs
	Storage Time	t_{stg}		—	2.3	—	μs
	Fall Time	t_f	$I_{B1} = 10$ mA, $I_{B2} = 20$ mA, DUTY CYCLE ≦ 1%	—	0.2	—	μs

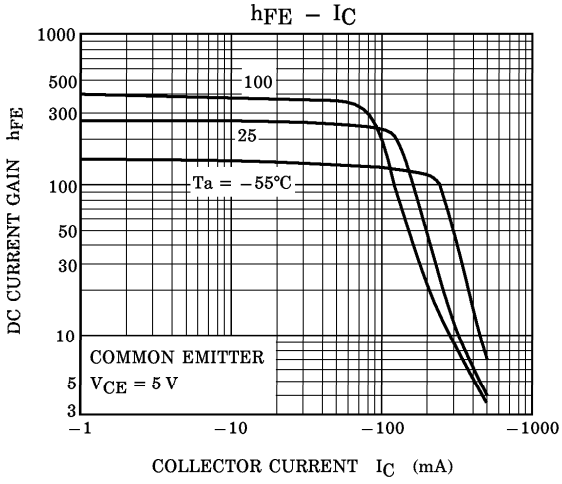
$I_C - V_{CE}$



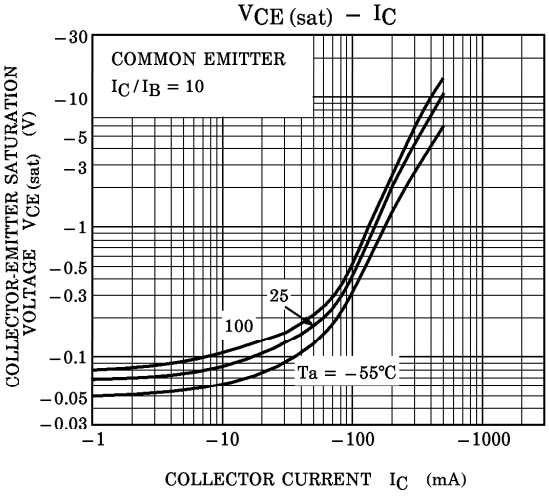
$I_C - V_{BE}$



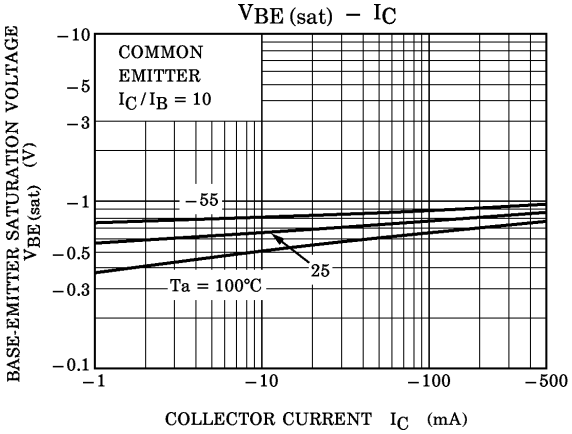
$h_{FE} - I_C$



$V_{CE\,(sat)} - I_C$



$V_{BE\,(sat)} - I_C$



SAFE OPERATING AREA