

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL PLANAR TYPE

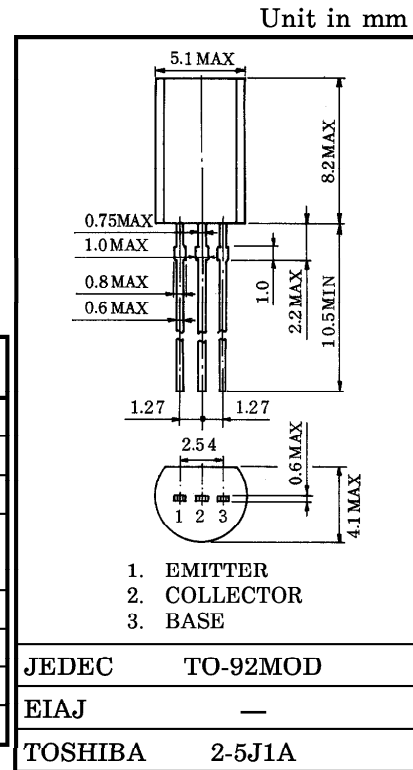
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POWER AMPLIFIER APPLICATIONS
HIGH SPEED SWITCHING APPLICATIONS

- High DC Current Gain : $h_{FE} = 150 \sim 400$ ($I_C = -0.5A$)
- Low Saturation Voltage : $V_{CE(sat)} = -0.5V$ (MAX.) ($I_C = -1A$)
- High Speed Switching : $t_{stg} = 1.0\mu s$ (TYP.)

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-50	V
Collector-Emitter Voltage		V_{CEO}	-50	V
Emitter-Base Voltage		V_{EBO}	-7	V
Collector Current	DC	I_C	-2	A
	Peak	I_{CP}	-4	
Base Current		I_B	-1	A
Collector Power Dissipation		P_C	900	mW
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55~150	$^\circ C$



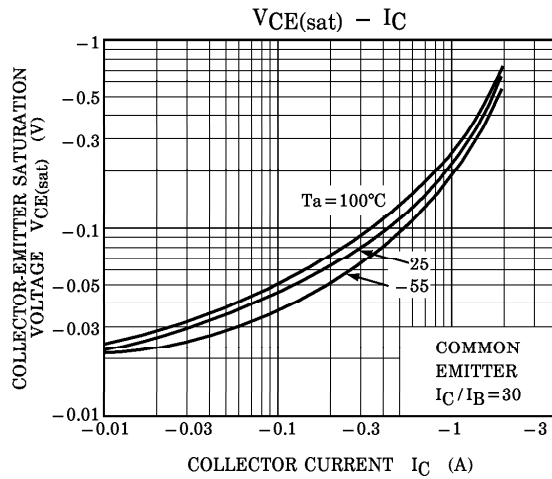
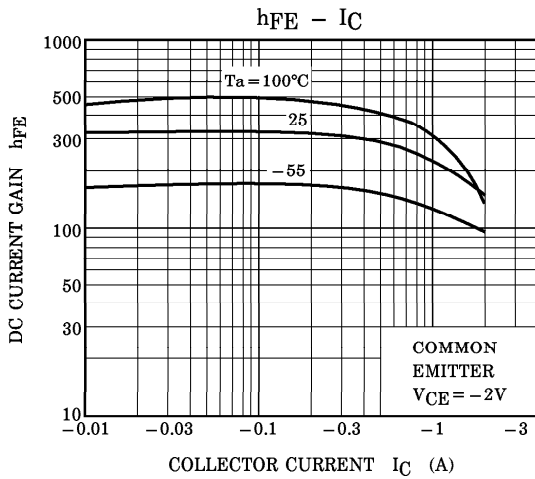
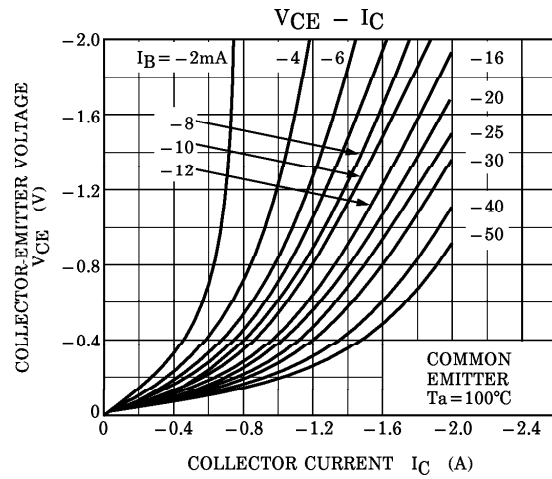
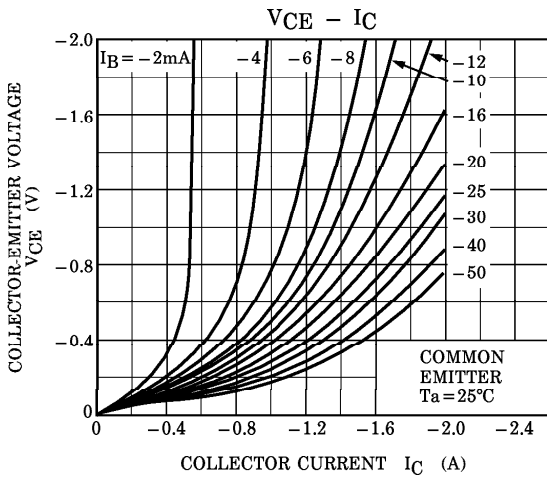
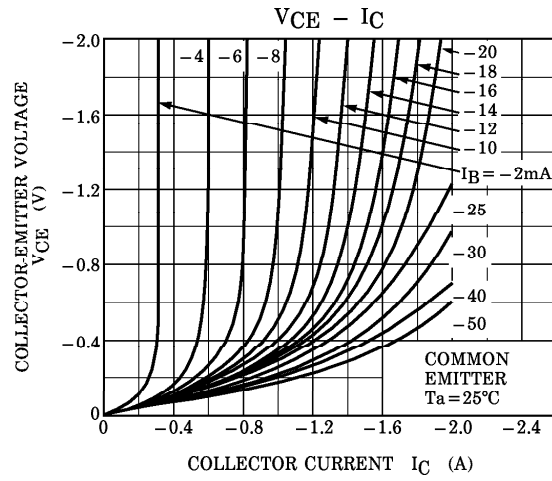
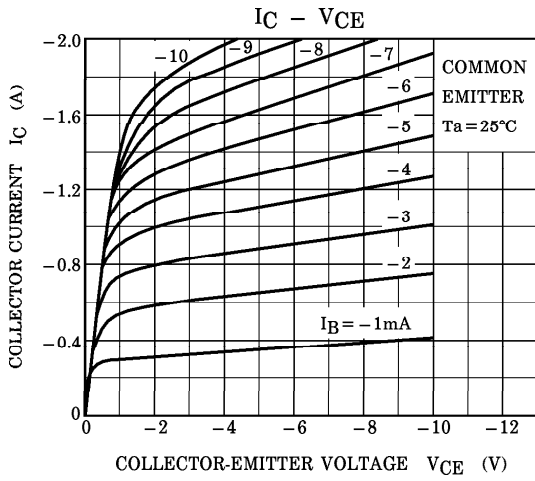
Weight : 0.36g

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

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -50V, I_E = 0$	—	—	-0.1	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -7V, I_C = 0$	—	—	-0.1	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-50	—	—	V
DC Current Gain		$h_{FE(1)}$	$V_{CE} = -2V, I_C = -0.5A$	150	—	400	
		$h_{FE(2)}$	$V_{CE} = -2V, I_C = -1.5A$	60	—	—	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C = -1A, I_B = -0.033A$	—	-0.2	-0.5	V
	Base-Emitter	$V_{BE(sat)}$	$I_C = -1A, I_B = -0.033A$	—	-0.9	-1.2	
Transition Frequency		f_T	$V_{CE} = -2V, I_C = -0.5A$	—	110	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	50	—	pF
Switching Time	Turn-on Time	t_{on}		—	0.2	—	μs
	Storage Time	t_{stg}		—	1.0	—	
	Fall Time	t_f		—	—	0.2	

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