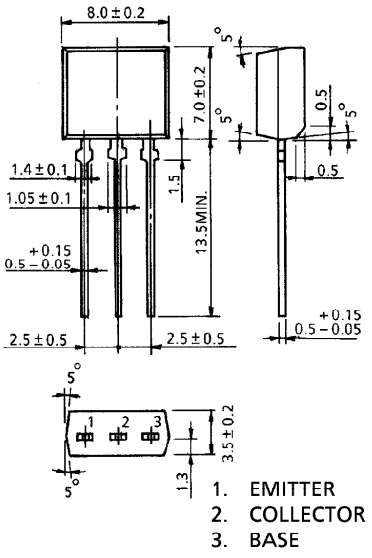
TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE

2SB1602

POWER AMPLIFIER APPLICATIONS

- High DC Current Gain
  : $h_{FE\,(1)}$ = 300~1000
- Low Collector Saturation Voltage
  : $V_{CE\,(sat)}$ = −0.5V (Typ.)
- Complementary to 2SD2462

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	2-8M1A

Weight : 0.55g (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	−60	V
Collector-Emitter Voltage		V_{CEO}	−60	V
Emitter-Base Voltage		V_{EBO}	−7	V
Collector Current	DC	I_C	−3	A
	Pulse	I_{CP}	−6	
Base Current		I_B	−0.6	A
Collector Power Dissipation		P_C	1.3	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = −60V, I_E = 0	—	—	−100	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = −7V, I_C = 0	—	—	−100	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)\,CEO}$	I_C = −50mA, I_B = 0	−60	—	—	V
DC Current Gain	$h_{FE\,(1)}$	V_{CE} = −5V, I_C = −0.5A	300	—	1000	
	$h_{FE\,(2)}$	V_{CE} = −5V, I_C = −1.5A	350	—	—	
Collector-Emitter Saturation Voltage	$V_{CE\,(sat)}$	I_C = −2A, I_B = −20mA	—	−0.5	−1.5	V
Base-Emitter Voltage	V_{BE}	V_{CE} = −5V, I_C = −0.5A	—	−0.7	−1.0	V
Collector Output Capacitance	C_{ob}	V_{CB} = −10V, I_E = 0, f = 1MHz	—	60	—	pF

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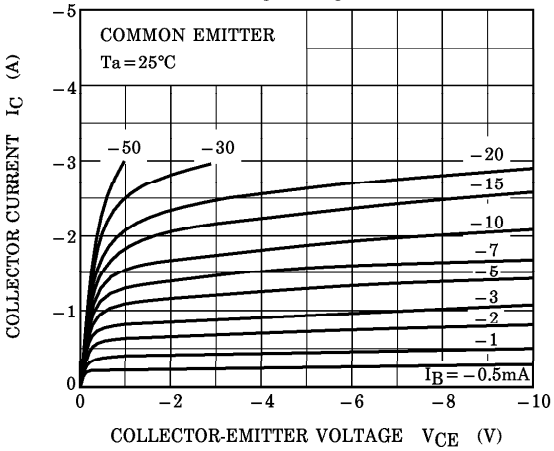
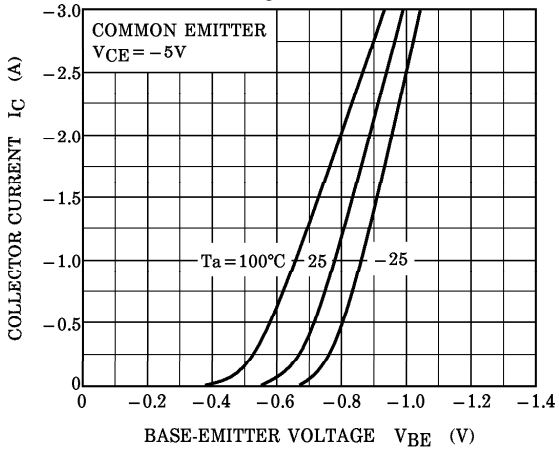
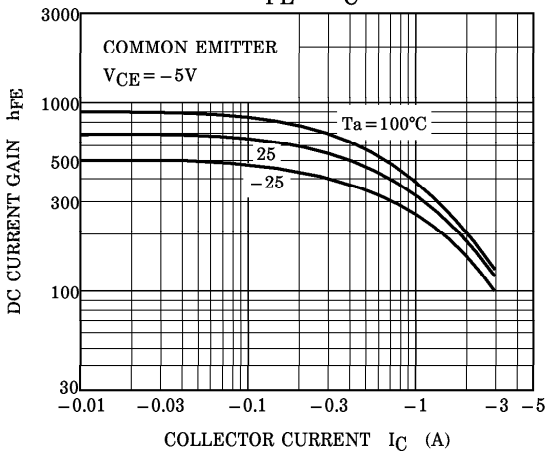
I_C – V_{CE}



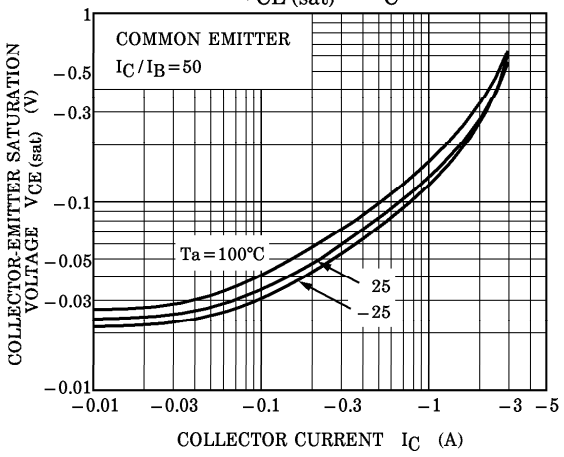
I_C – V_{BE}



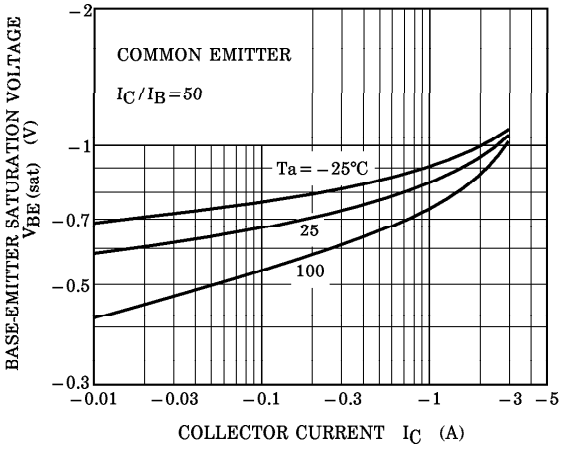
h_{FE} – I_C



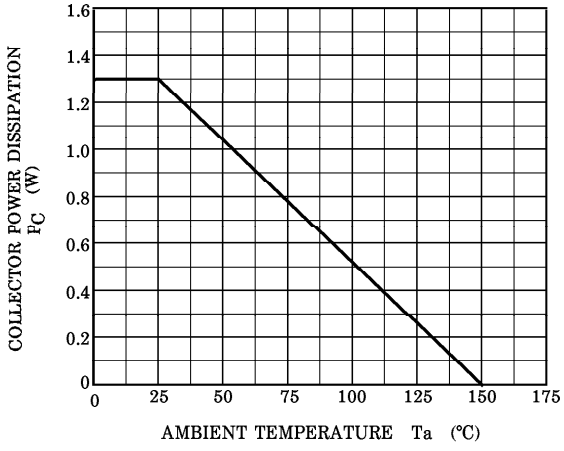
$V_{CE\,(sat)}$ – I_C



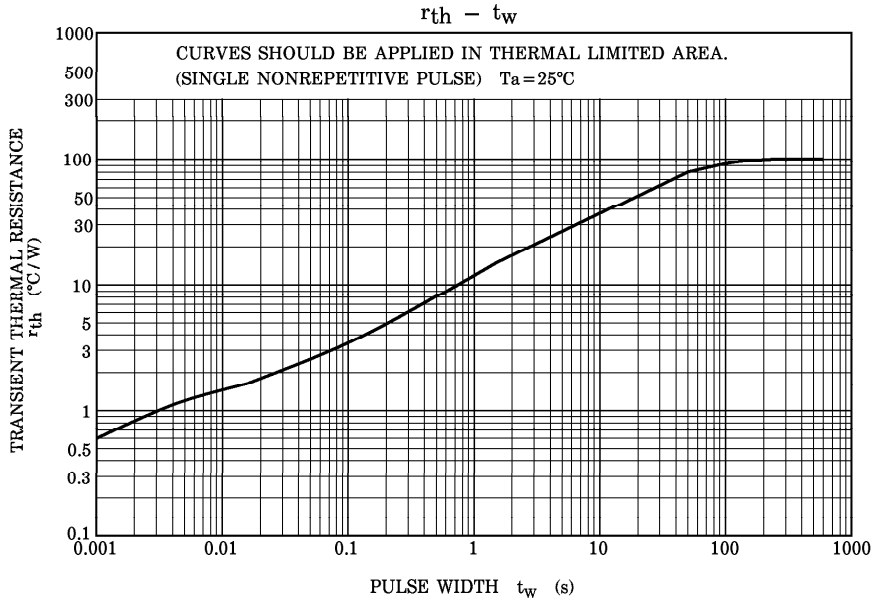
$V_{BE\,(sat)}$ – I_C



P_C – Ta



$r_{th} - t_w$



SAFE OPERATING AREA