TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC3376

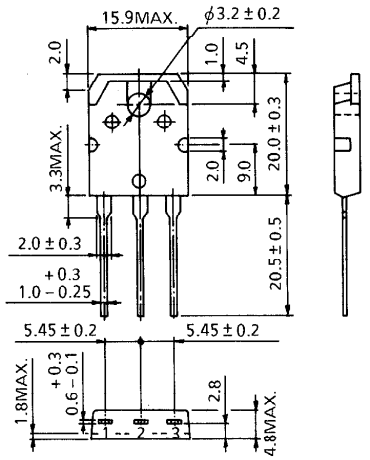
SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS.

HIGH SPEED DC-DC CONVERTER APPLICATIONS.

INDUSTRIAL APPLICATIONS

- Excellent Switching Times (I_C = 0.8A)
  : t_r = 1.0μs (Max.), t_f = 1.0μs (Max.)
- High Collector-Emitter Breakdown Voltage : V_{CEO} = 800V

Unit in mm



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

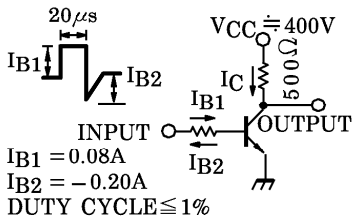
JEDEC	—
EIAJ	—
TOSHIBA	2-16C1A

Weight : 4.7g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	900	V
Collector-Emitter Voltage		V_{CEO}	800	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	3	A
	Pulse	I_{CP}	5	
Base Current		I_B	1	A
Collector Power Dissipation (Tc = 25°C)		P_C	60	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} = 800V, I_E = 0	—	—	100	μA
Emitter Cut-off Current		I_{EBO}	V_{EB} = 7V, I_C = 0	—	—	1	mA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	I_C = 1mA, I_E = 0	900	—	—	V
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C = 10mA, I_B = 0	800	—	—	V
DC Current Gain		h_{FE}	V_{CE} = 5A, I_C = 0.8A	10	—	—	
Collector-Emitter Saturation Voltage		$V_{CE\ (sat)}$	I_C = 0.8A, I_B = 0.16A	—	—	0.6	V
Base-Emitter Saturation Voltage		$V_{BE\ (sat)}$	I_C = 0.8A, I_B = 0.16A	—	—	1.2	V
Switching Time	Rise Time	t_r		—	—	1.0	μs
	Storage Time	t_{stg}		—	—	4.0	
	Fall Time	t_f		—	—	1.0	

I_{B1} = 0.08A
I_{B2} = −0.20A
DUTY CYCLE ≦ 1%

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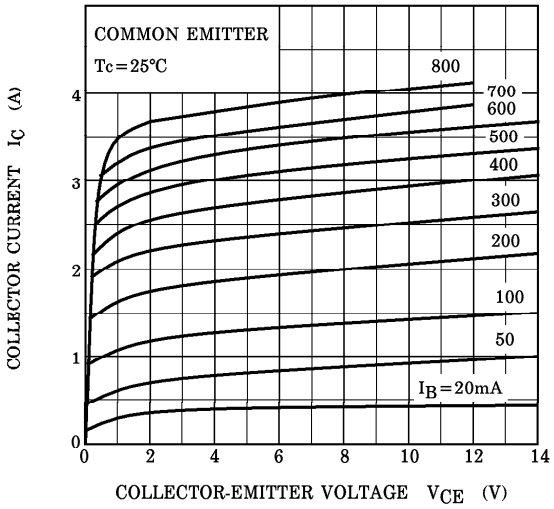
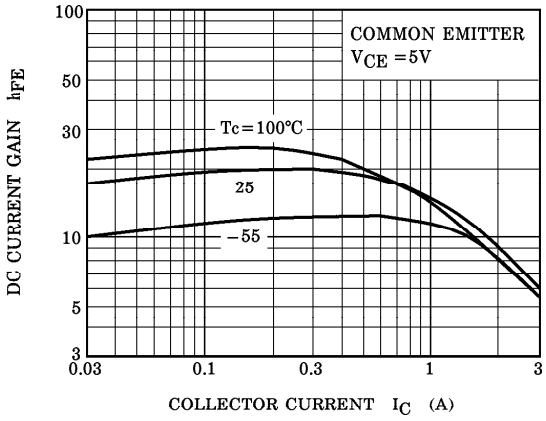
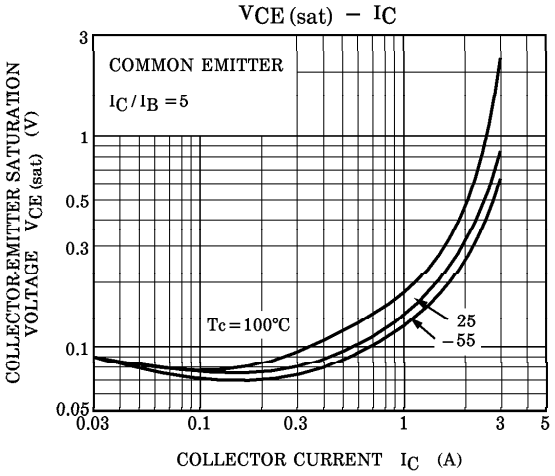
I_C – V_{CE}



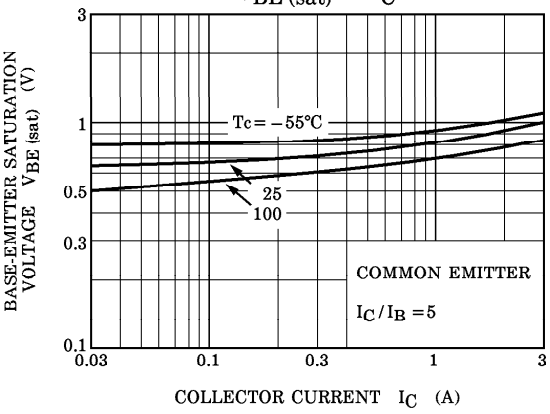
h_{FE} – I_C



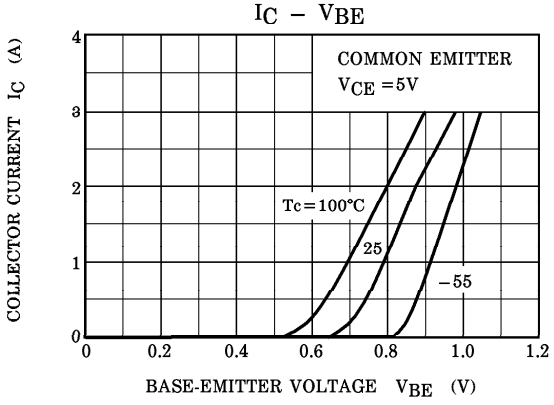
$V_{CE\,(sat)}$ – I_C



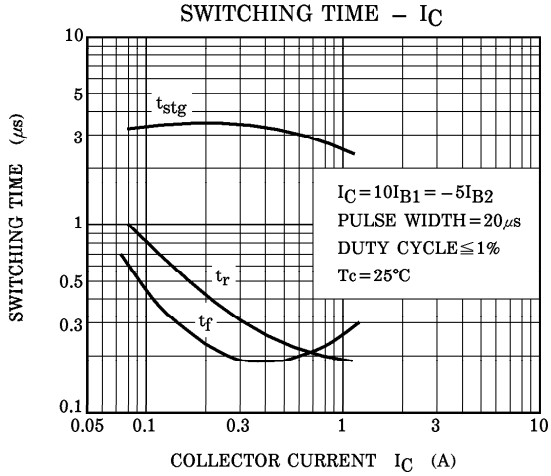
$V_{BE\,(sat)}$ – I_C



I_C – V_{BE}



SWITCHING TIME – I_C



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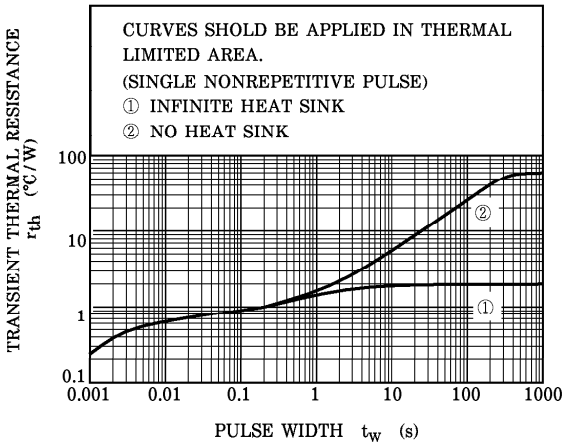
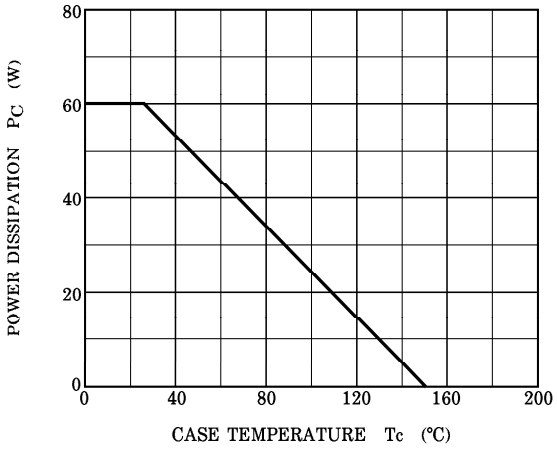
r_{th} – t_w



P_C – Tc



SAFE OPERATING AREA