TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC2555

SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS.

HIGH SPEED DC-DC CONVERTER APPLICATIONS.

INDUSTRIAL APPLICATIONS

- Excellent Switching Times
  : $t_r = 1.0\mu s$ (Max.), $t_f = 1.0\mu s$ (Max.) at $I_C = 4A$
- High Collector Breakdown Voltage : $V_{CEO} = 400V$

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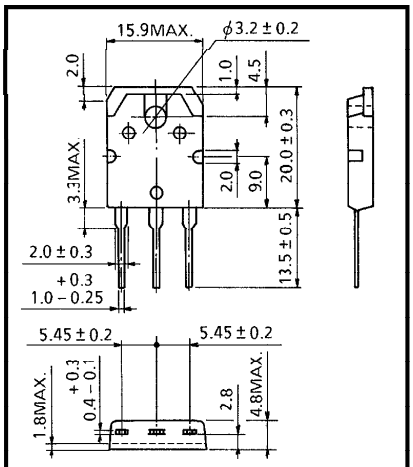
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	500	V
Collector-Emitter Voltage		V_{CEO}	400	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	8	A
	Pulse	I_{CP}	10	A
Base Current		I_B	4	A
Collector Power Dissipation	Ta = 25°C	P_C	2.5	W
	Tc = 25°C		80	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

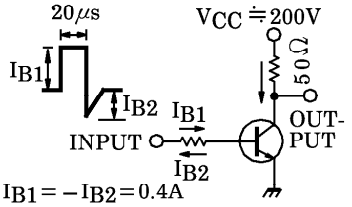


1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

JEDEC	—
EIAJ	—
TOSHIBA	2-16B1A

Weight : 4.6g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = 400V$, $I_E = 0$	—	—	100	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = 7V$, $I_C = 0$	—	—	1	mA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	$I_C = 1mA$, $I_E = 0$	500	—	—	V
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = 10mA$, $I_B = 0$	400	—	—	V
DC Current Gain		$h_{FE(1)}$	$V_{CE} = 5V$, $I_C = 1A$	15	—	—	
		$h_{FE(2)}$	$V_{CE} = 5V$, $I_C = 4A$	10	—	—	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C = 4A$, $I_B = 0.8A$	—	—	1.0	V
	Base-Emitter	$V_{BE(sat)}$	$I_C = 4A$, $I_B = 0.8A$	—	—	1.5	
Switching Time	Rise Time	t_r		—	—	1.0	μs
	Storage Time	t_{stg}		—	—	2.5	
	Fall Time	t_f		—	—	1.0	

$I_{B1} = -I_{B2} = 0.4A$
DUTY CYCLE ≦ 1%

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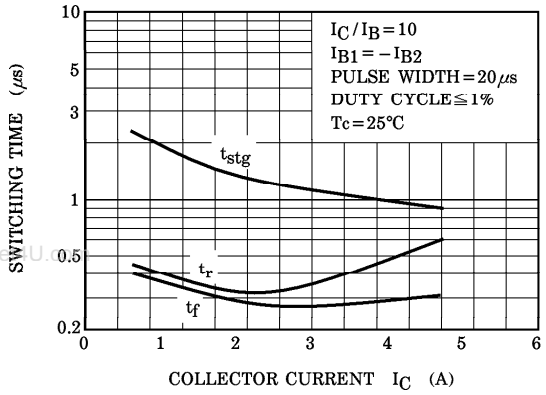
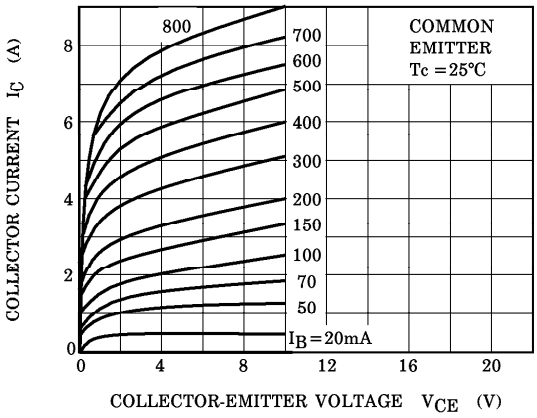
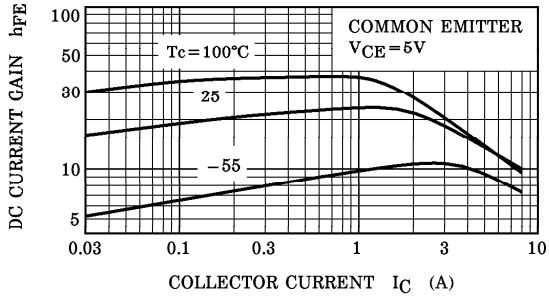
SWITCHING CHARACTERISTICS



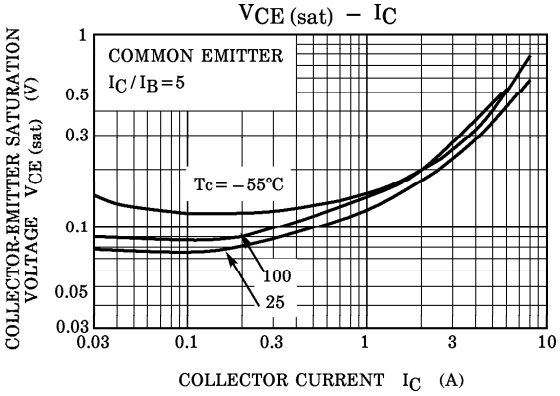
I_C – V_{CE}



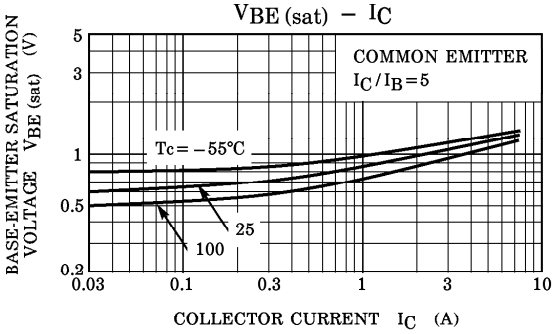
h_{FE} – I_C



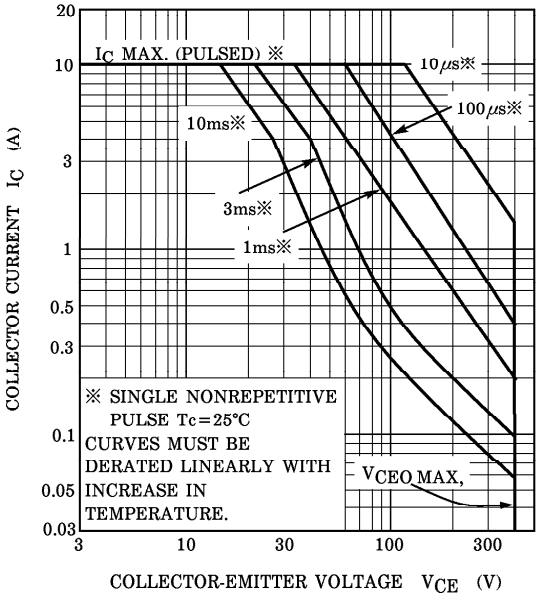
$V_{CE\,(sat)}$ – I_C



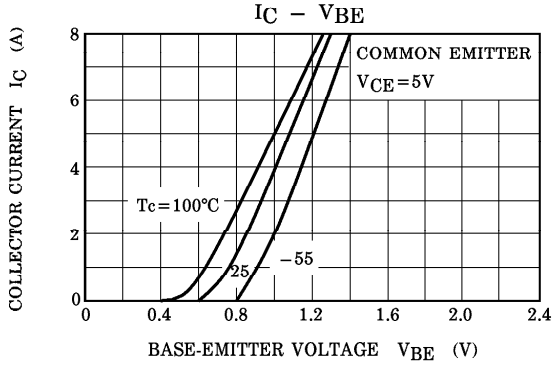
$V_{BE\,(sat)}$ – I_C



SAFE OPERATING AREA



I_C – V_{BE}



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