

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

# 2SC2555

SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS.

INDUSTRIAL APPLICATIONS

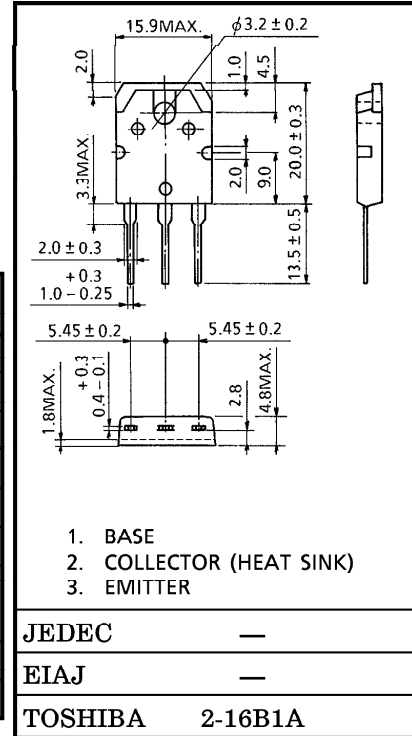
Unit in mm

HIGH SPEED DC-DC CONVERTER 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 :  $V_{CEO} = 400V$

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

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	$T_a = 25^\circ C$	$P_C$	2.5	W
	$T_c = 25^\circ C$		80	
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$



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

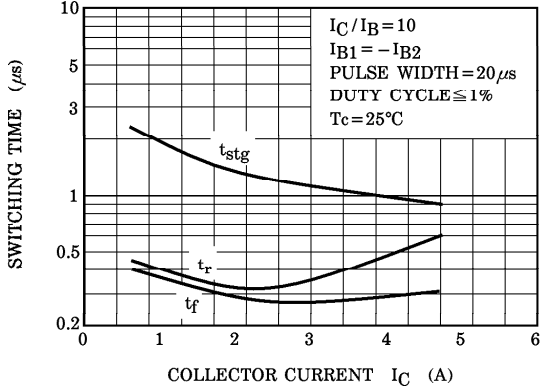
Weight : 4.6g

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB} = 400V, I_E = 0$	—	—	100	$\mu A$
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	$\mu s$
	Storage Time	$t_{stg}$		—	—	2.5	
	Fall Time	$t_f$		$I_{B1} = -I_{B2} = 0.4A$ DUTY CYCLE $\leq 1\%$	—	—	

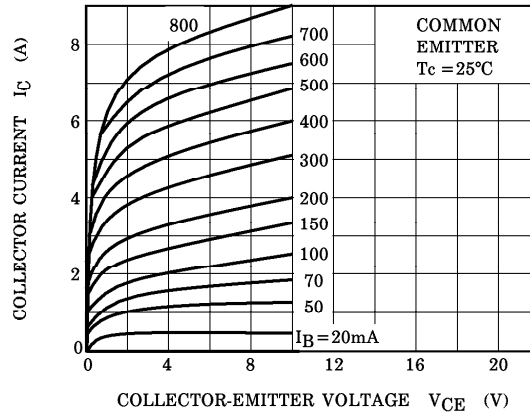
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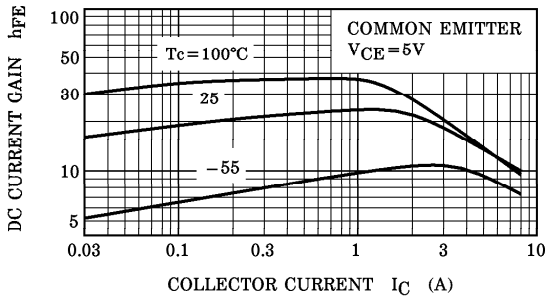
SWITCHING CHARACTERISTICS



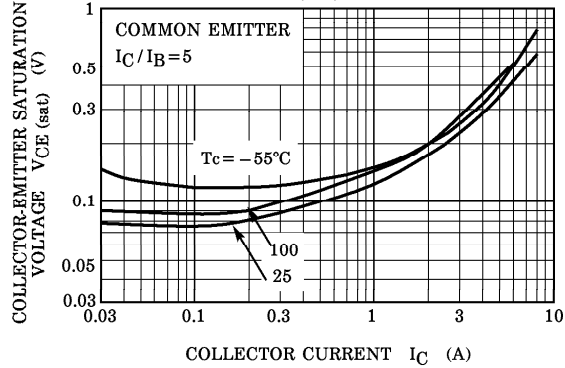
$I_C - V_{CE}$



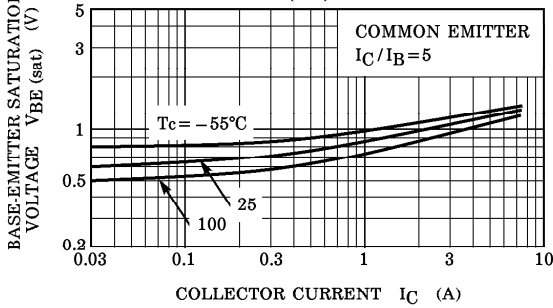
$h_{FE} - I_C$



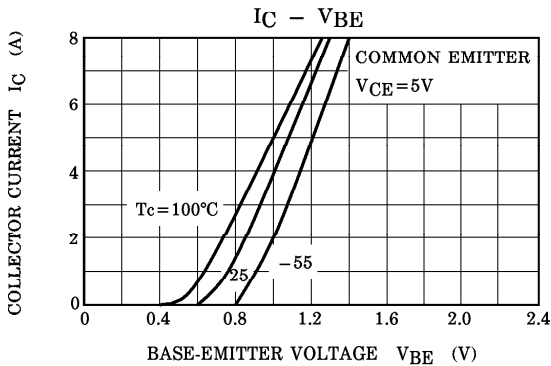
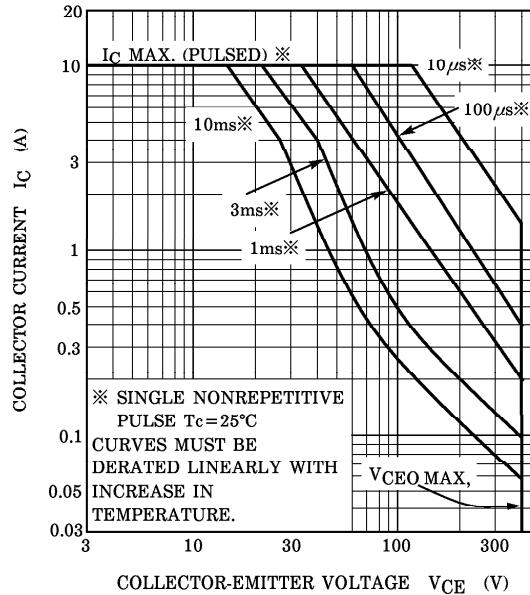
$V_{CE}(\text{sat}) - I_C$



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



SAFE OPERATING AREA



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