

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

# 2SC2552

SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS.

INDUSTRIAL APPLICATIONS

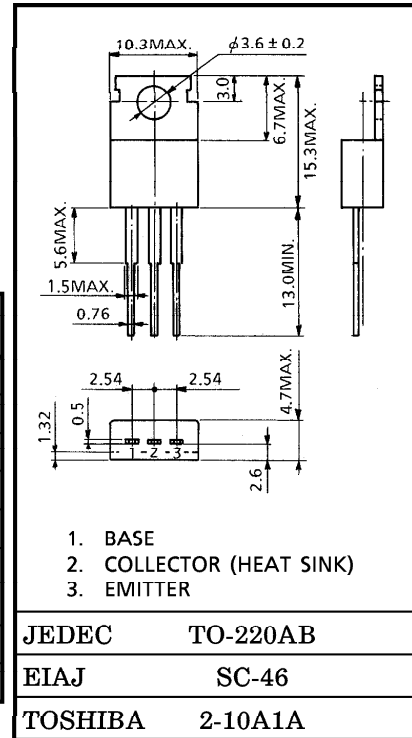
Unit in mm

HIGH SPEED DC-DC CONVERTER APPLICATIONS.

- Excellent Switching Times  
:  $t_r = 1.0\mu s$  (Max.)  $t_f = 1.0\mu s$  (Max.) at  $I_C = 0.8A$
- High Collector Breakdown Voltage :  $V_{CEO} = 400V$

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

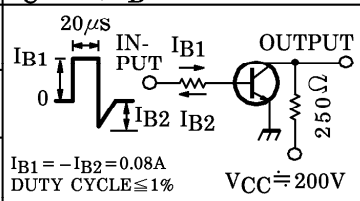
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	500	V
Collector-Emitter Voltage	$V_{CEO}$	400	V
Emitter-Base Voltage	$V_{EBO}$	7	V
Collector Current	$I_C$	2	A
Base Current	$I_B$	0.5	A
Collector Power Dissipation	$P_C$	$T_a = 25^\circ C$	1.5
		$T_c = 25^\circ C$	20
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$



Weight : 1.9g  
Mounting kit No. AC75

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

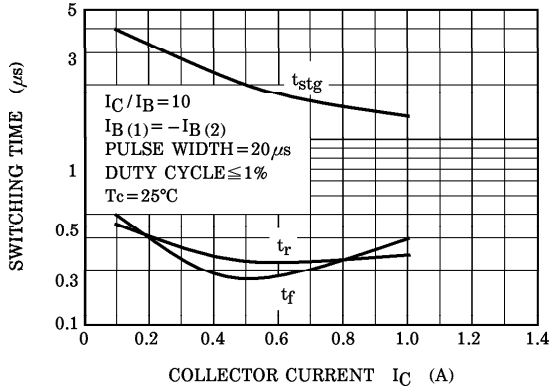
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 400V, I_E = 0$	—	—	100	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 7V, I_C = 0$	—	—	1	mA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1mA, I_E = 0$	500	—	—	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	400	—	—	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 0.1A$	20	—	—	
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 1A$	8	—	—	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	—	—	1.0	V
	Base-Emitter	$V_{BE(sat)}$	—	—	1.5	
Switching Time	Turn-on Time	$t_r$	—	—	1.0	$\mu s$
	Storage Time	$t_{stg}$	—	—	2.5	
	Fall Time	$t_f$	$I_{B1} = -I_{B2} = 0.08A$ DUTY CYCLE $\leq 1\%$	—	—	



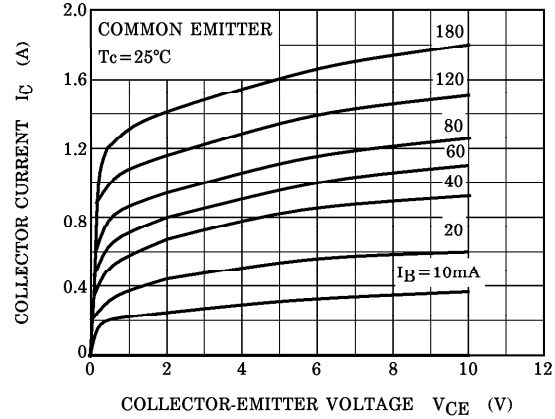
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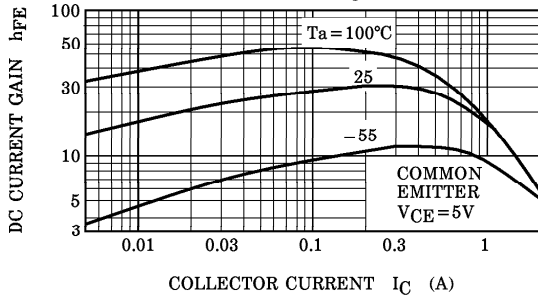
SWITCHING CHARACTERISTICS



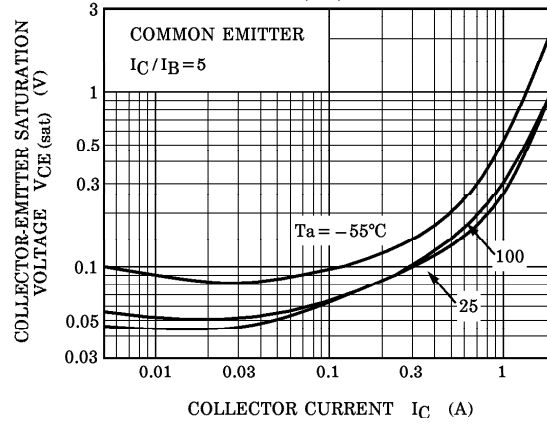
$I_C - V_{CE}$



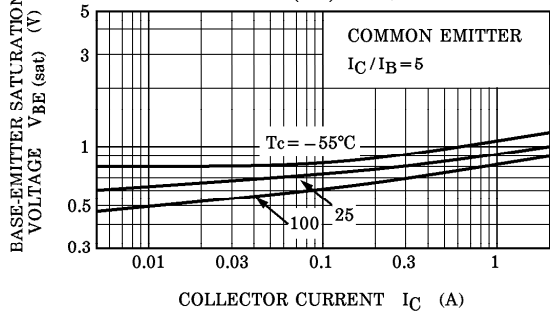
$h_{FE} - I_C$



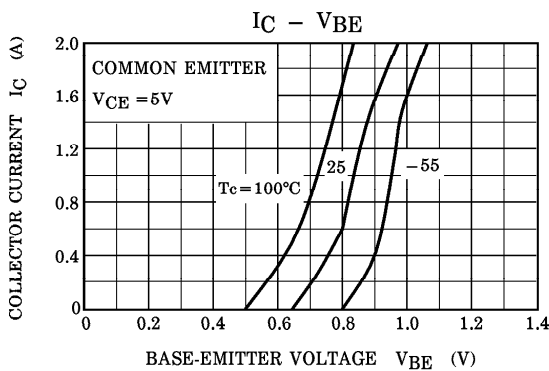
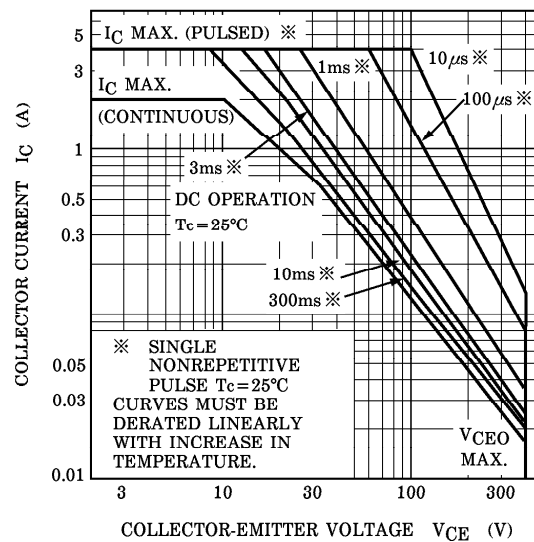
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



SAFE OPERATING AREA



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