

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

# 2SC5075

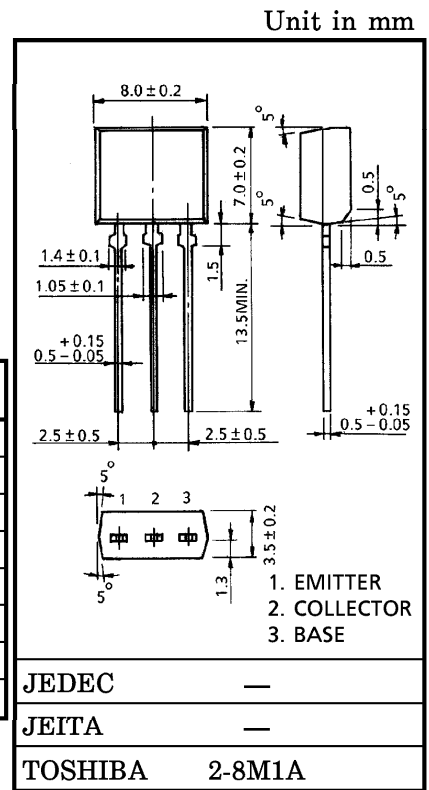
SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS

HIGH SPEED DC-DC CONVERTER APPLICATIONS

- High Speed Switching  
:  $t_r = 1.0\mu s$  (Max.),  $t_f = 1.0\mu s$  (Max.)
- High Collector Breakdown Voltage :  $V_{CEO} = 400V$

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

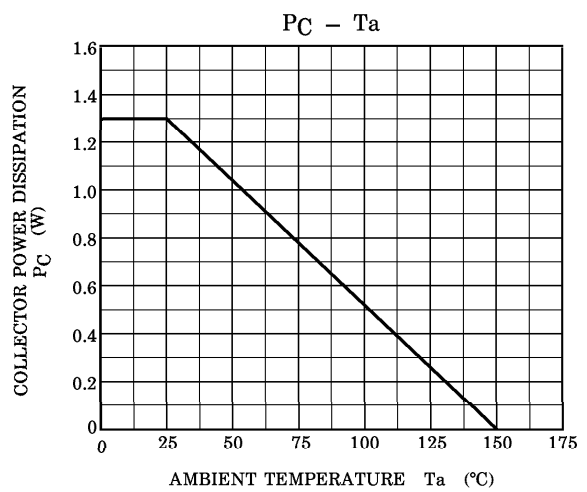
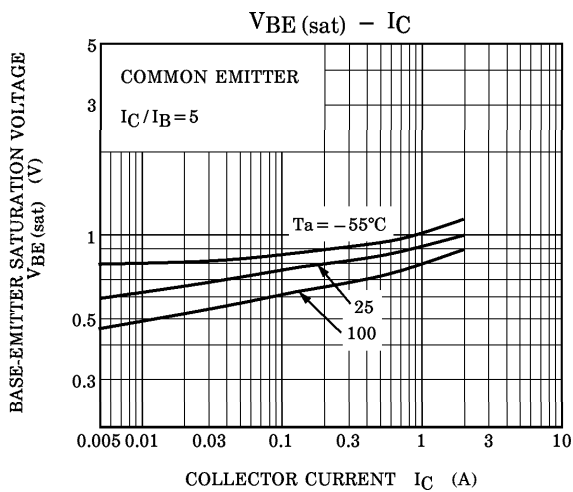
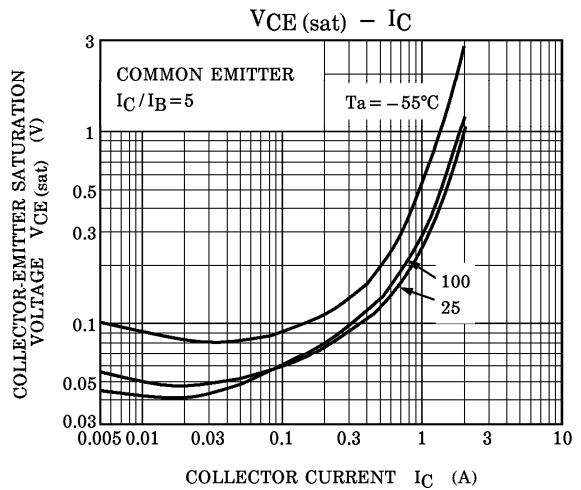
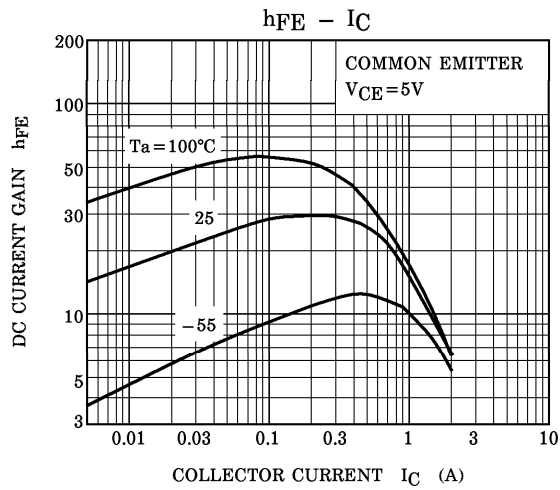
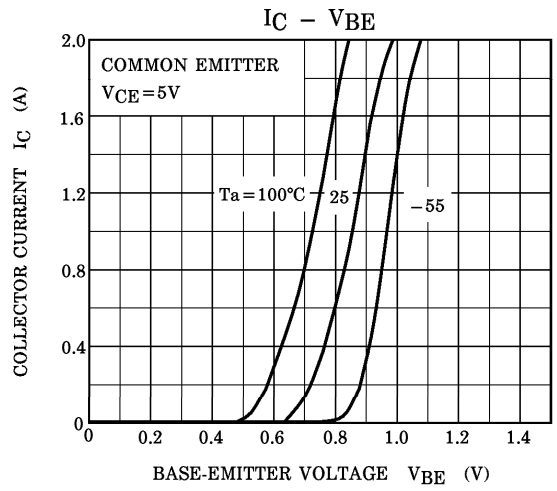
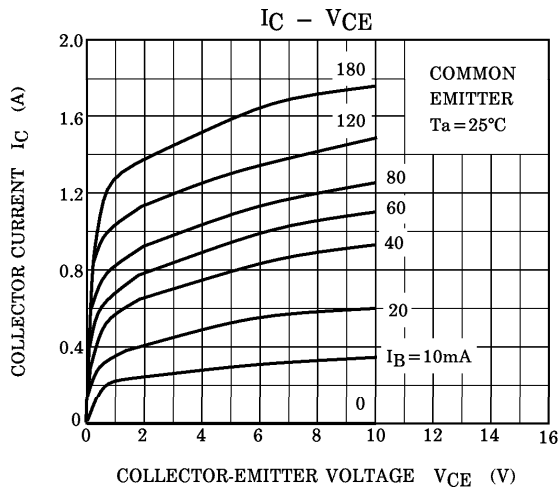
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	500	V
Collector-Emitter Voltage	$V_{CEO}$	400	V
Emitter-Base Voltage	$V_{EBO}$	7	V
Collector Current	$I_C$	2	A
Base Current	$I_B$	0.5	A
Collector Power Dissipation	$P_C$	1.3	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$

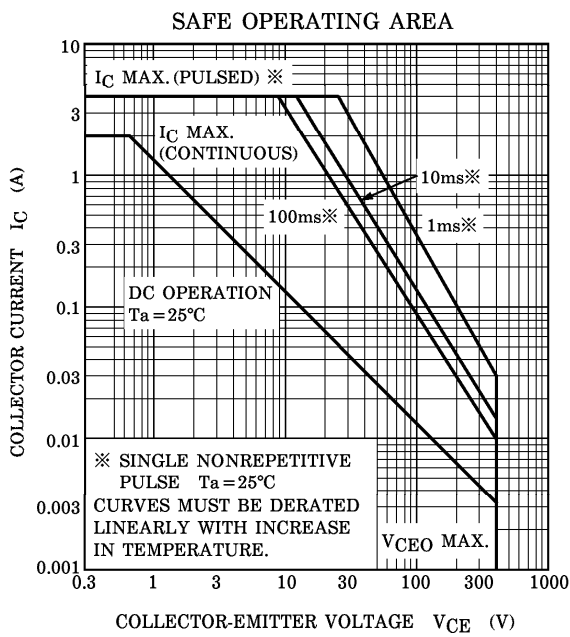
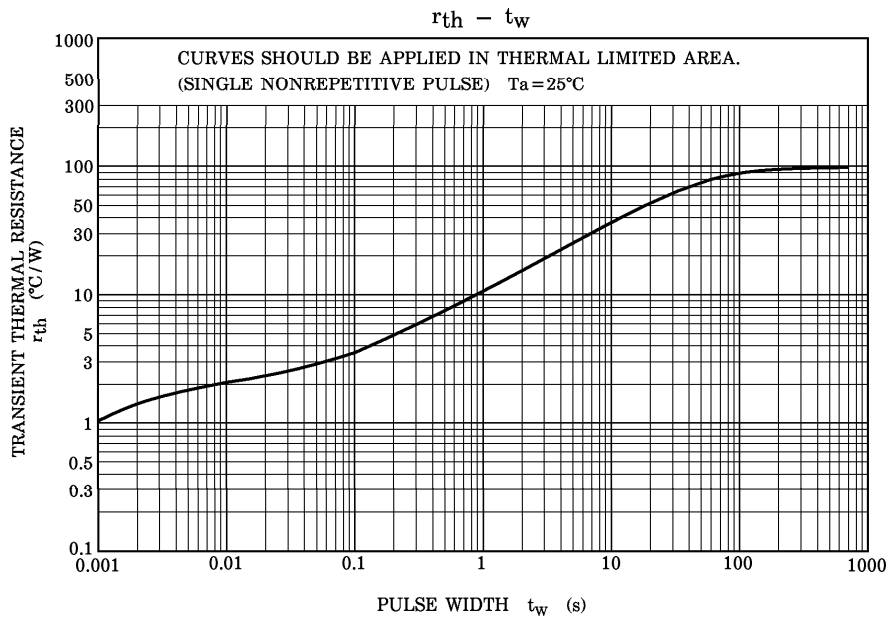


Weight : 0.55g (Typ.)

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	$V_{CE(sat)}$	$I_C = 1A, I_B = 0.2A$	—	—	1.0	V
	Base-Emitter	$V_{BE(sat)}$	$I_C = 1A, I_B = 0.2A$	—	—	1.5	
Switching Time	Rise Time	$t_r$		—	—	1.0	$\mu s$
	Storage Time	$t_{stg}$		—	—	2.5	
	Fall Time	$t_f$		—	—	1.0	





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