

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

# 2SC3425

SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS.

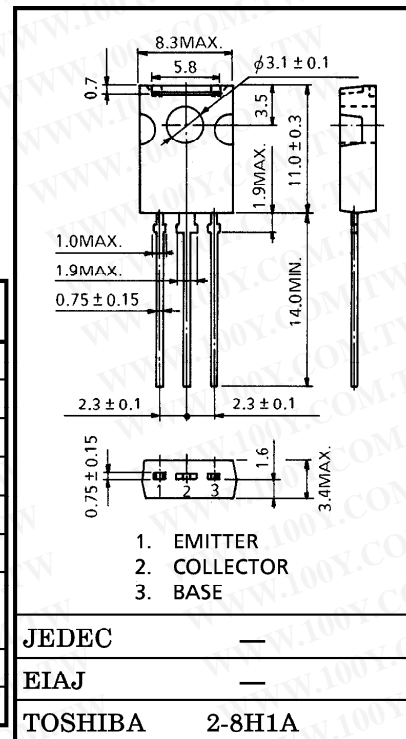
INDUSTRIAL APPLICATIONS  
 Unit in mm

HIGH SPEED DC-DC CONVERTER APPLICATIONS.

- Excellent Switching Times  
 :  $t_r = 1.0\mu s$  (Max.),  $t_f = 1.5\mu s$  (Max.) at  $I_C = 0.5A$
- 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	$I_C$	0.8	A
	Pulse	$I_{CP}$	1.5	A
Base Current		$I_B$	0.5	A
Collector Power Dissipation	$T_a = 25^\circ C$	$P_C$	1.2	W
	$T_c = 25^\circ C$		10	
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$



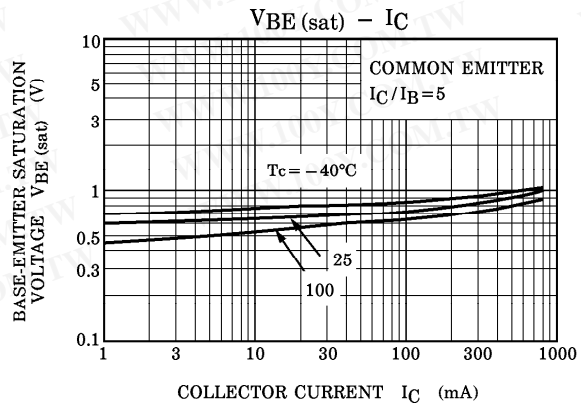
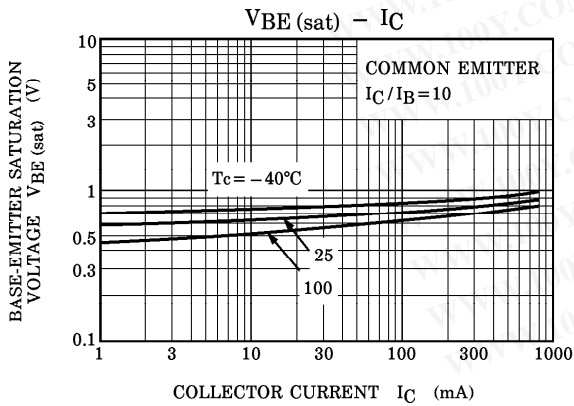
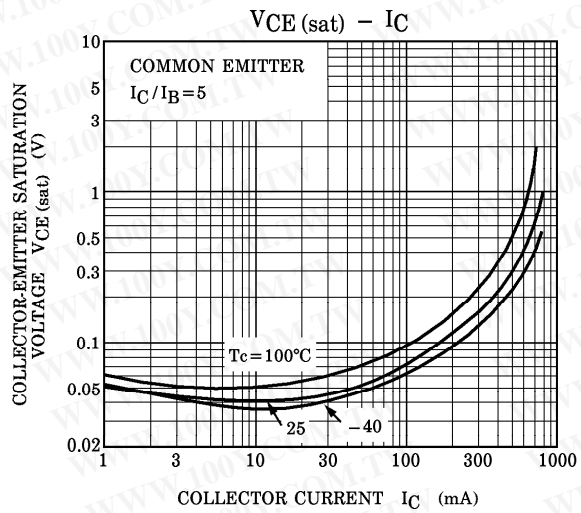
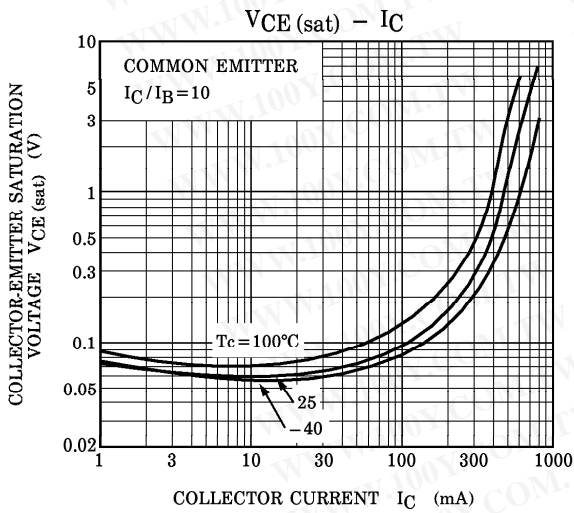
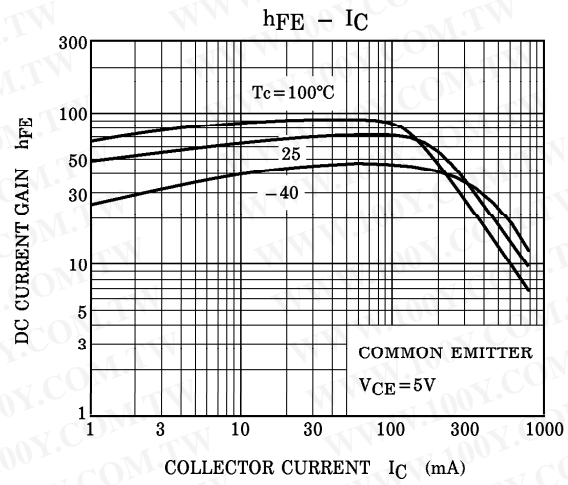
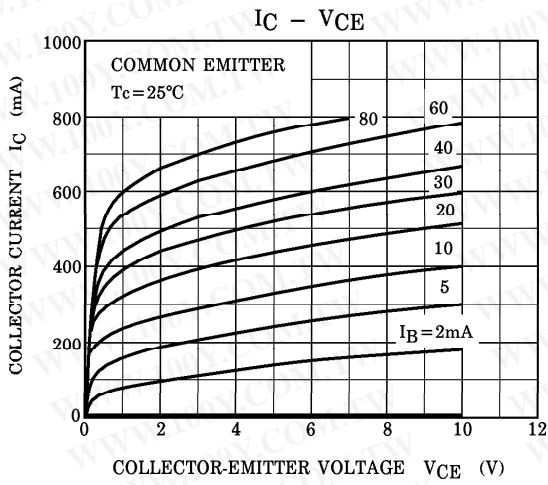
ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

Weight : 0.82g

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		$I_{EBO}$	$V_{EB} = 7V, I_C = 0$	—	—	100	$\mu A$
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		$h_{FE}$	$V_{CE} = 5V, I_C = 0.1A$	20	—	100	
			$V_{CE} = 5V, I_C = 0.5A$	10	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 0.1A, I_B = 0.01A$	—	—	0.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = 0.1A, I_B = 0.01A$	—	—	1.0	V
Switching Time	Rise Time	$t_r$		—	—	1.0	$\mu s$
	Storage Time	$t_{stg}$		—	—	2.5	
	Fall Time	$t_f$		—	—	1.5	

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