

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

2SC3425

SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS.

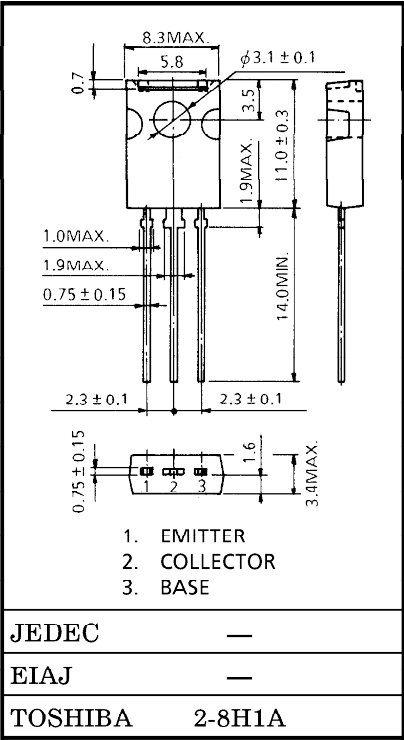
INDUSTRIAL APPLICATIONS
Unit in mm

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 : $V_{CEO}=400V$

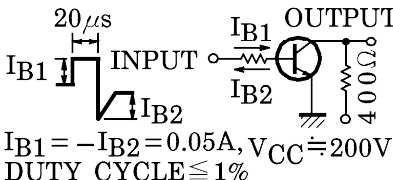
MAXIMUM RATINGS (Ta = 25°C)

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	0.8	A
	Pulse	I_{CP}	1.5	A
Base Current		I_B	0.5	A
Collector Power Dissipation	Ta = 25°C	P_C	1.2	W
	Tc = 25°C		10	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C



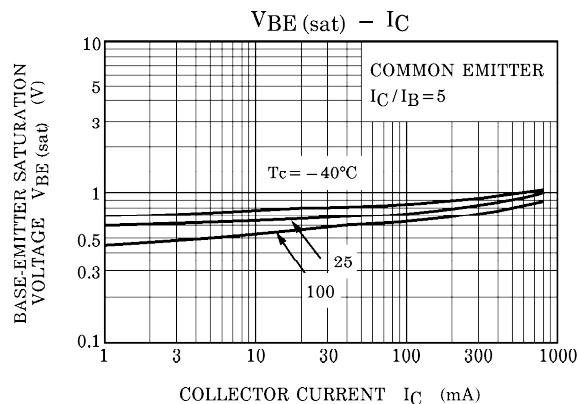
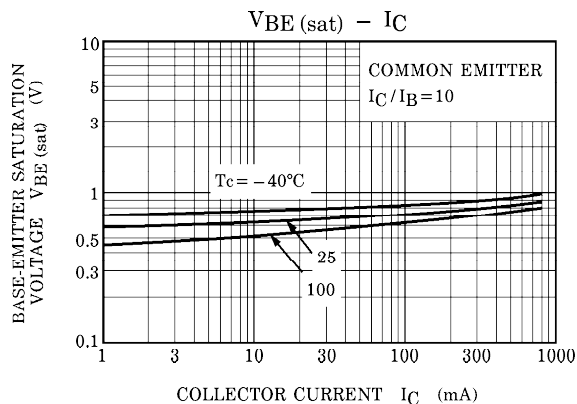
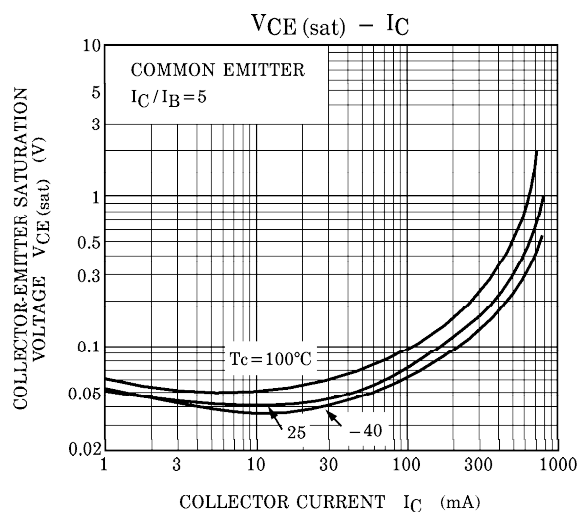
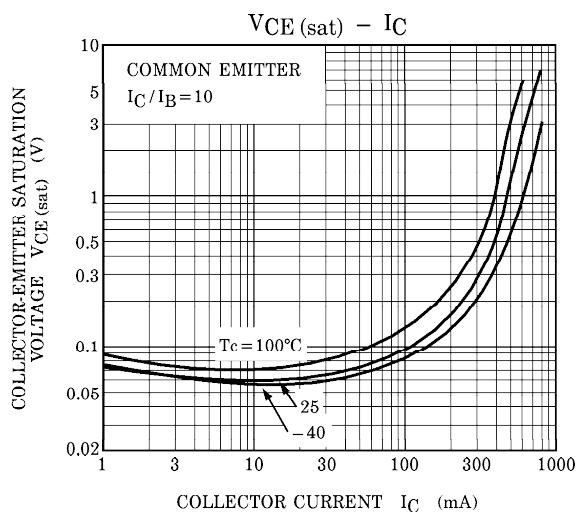
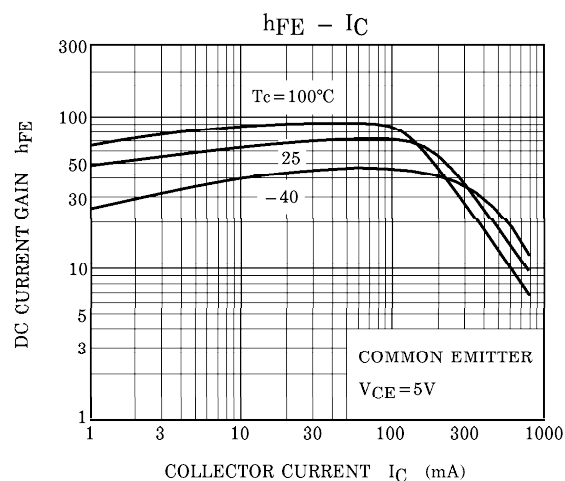
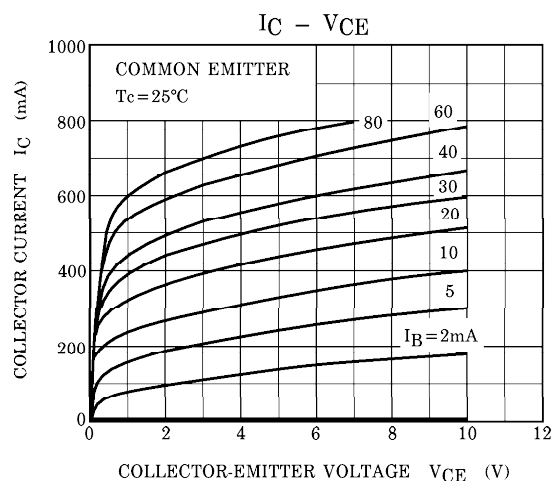
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Weight : 0.82g

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=400V, I_E=0$	—	—	100	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=7V, I_C=0$	—	—	100	μA
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	 $I_{B1} = -I_{B2} = 0.05A, V_{CC} \approx 200V$ DUTY CYCLE $\leq 1\%$	—	—	1.0	μs
	Storage Time	t_{stg}		—	—	2.5	
	Fall Time	t_f		—	—	1.5	

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