

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC3148

SWITCHING REGULATOR AND HIGH VOLTAGE.

SWITCHING APPLICATIONS.

HIGH SPEED DC-DC CONVERTER APPLICATIONS.

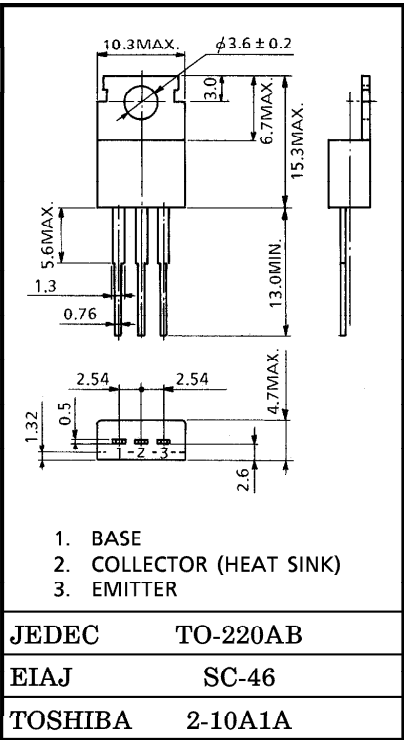
- Excellent Switching Times ($I_C=0.8A$)
 $t_r=1.0\mu s$ Max., $t_f=1.0\mu s$ Max.
- High Collector-Emitter Breakdown Voltage : $V_{CEO}=800V$

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	900	V
Collector-Emitter Voltage		V_{CEO}	800	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	3	A
	Pulse	I_{CP}	5	
Base Current		I_B	1	A
Collector Power Dissipation	$T_a=25^{\circ}C$	P_C	1.5	W
	$T_c=25^{\circ}C$		40	
Junction Temperature		T_j	150	$^{\circ}C$
Storage Temperature Range		T_{stg}	-55~150	$^{\circ}C$

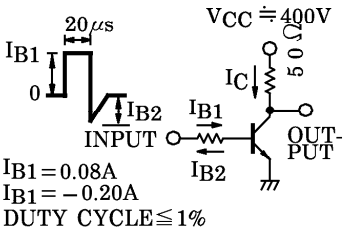
INDUSTRIAL APPLICATIONS

Unit in mm



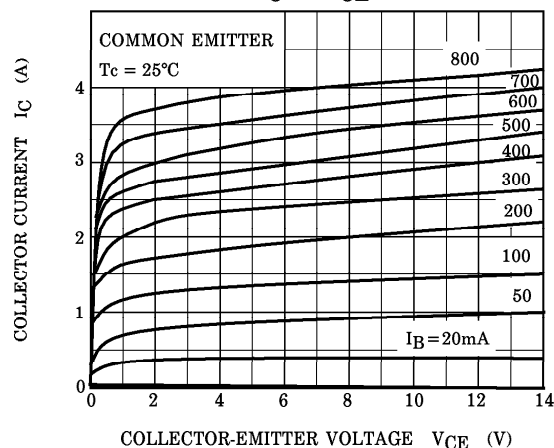
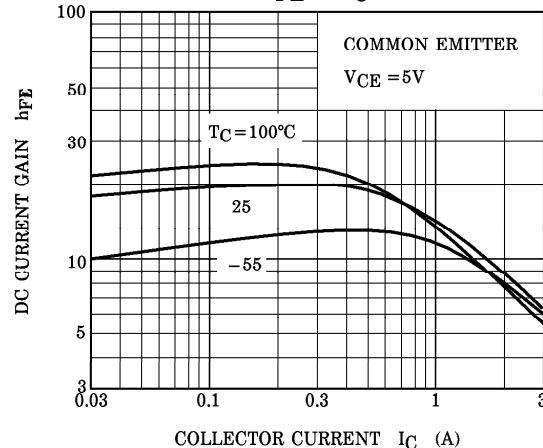
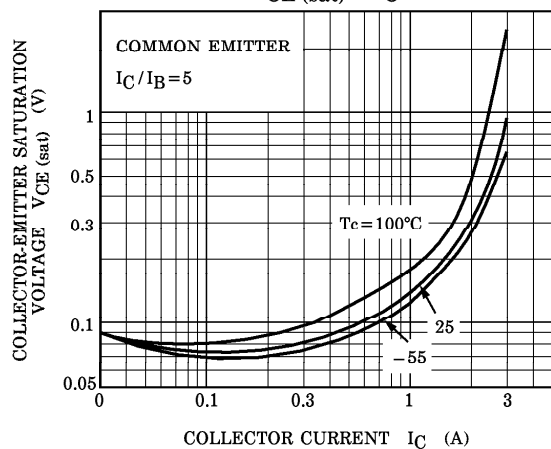
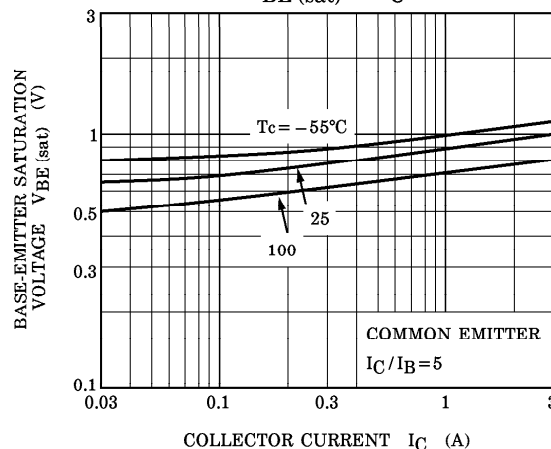
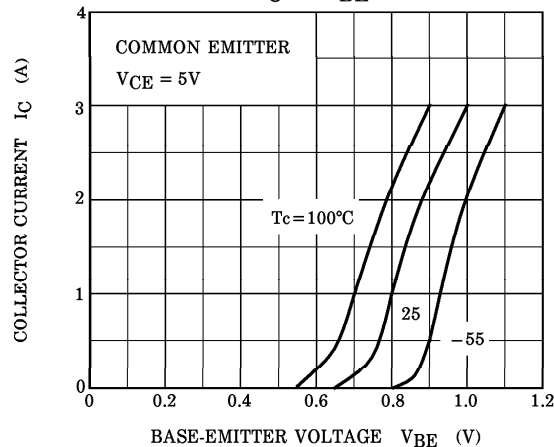
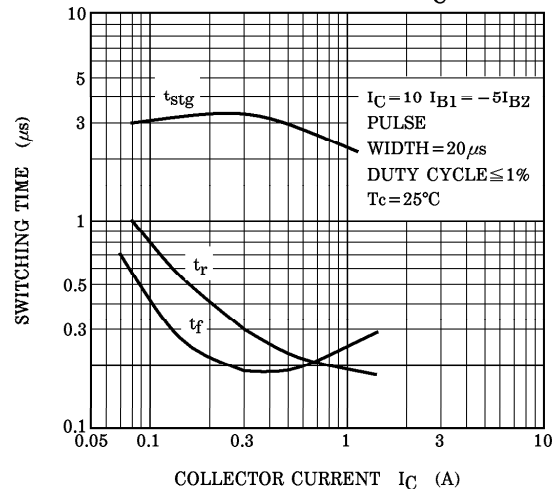
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$)

Weight : 1.9g

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=800V, I_E=0$	—	—	100	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=7V, I_C=0$	—	—	1	mA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	900	—	—	V
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	800	—	—	V
DC Current Gain		h_{FE}	$V_{CE}=5V, I_C=0.8A$	10	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=0.8A, I_B=0.16A$	—	—	0.6	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=0.8V, I_B=0.16A$	—	—	1.2	V
Switching Time	Rise Time	t_r	 $V_{CC}=400V$ $I_{B1}=0.08A$ $I_{B1}=-0.20A$ DUTY CYCLE $\leq 1\%$	—	—	1.0	μs
	Storage Time	t_{stg}		—	—	4.0	
	Fall Time	t_f		—	—	1.0	

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$I_C - V_{CE}$  $h_{FE} - I_C$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $I_C - V_{BE}$ SWITCHING TIME - I_C 

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