

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

# 2SC3148

SWITCHING REGULATOR AND HIGH VOLTAGE.  
 SWITCHING APPLICATIONS.  
 HIGH SPEED DC-DC CONVERTER APPLICATIONS.

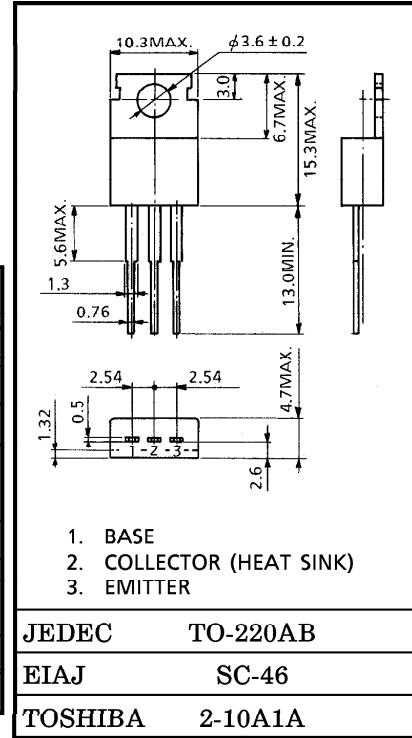
INDUSTRIAL APPLICATIONS

Unit in mm

- 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	$^\circ C$



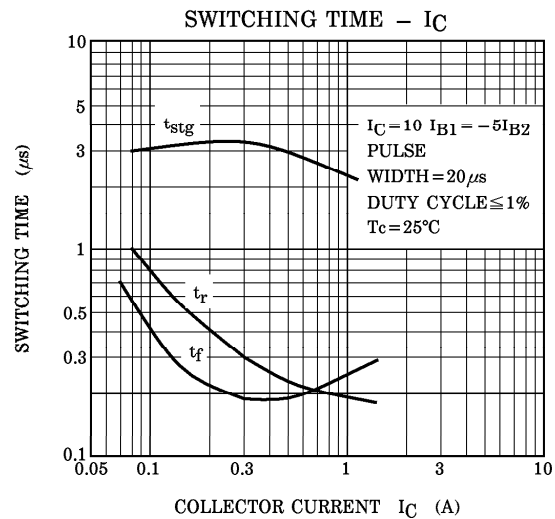
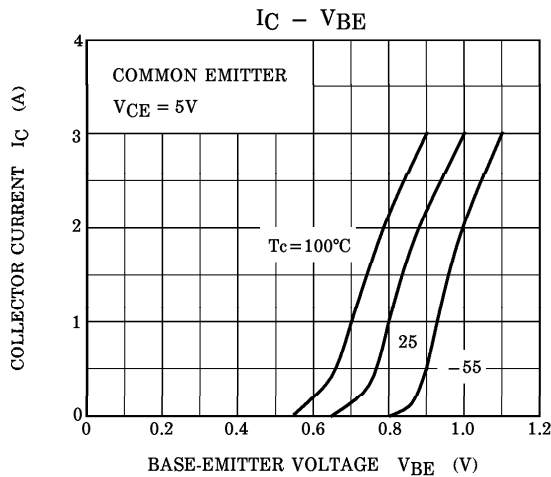
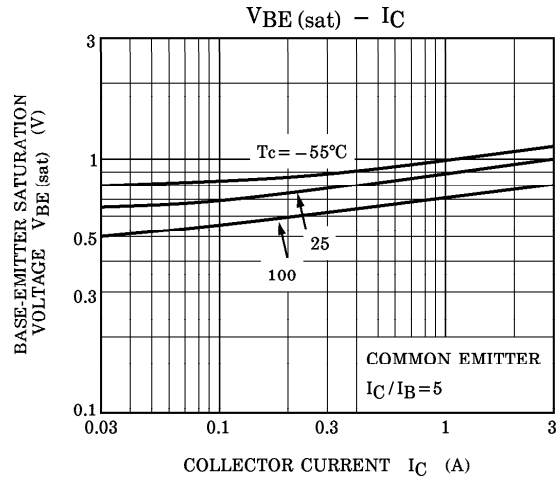
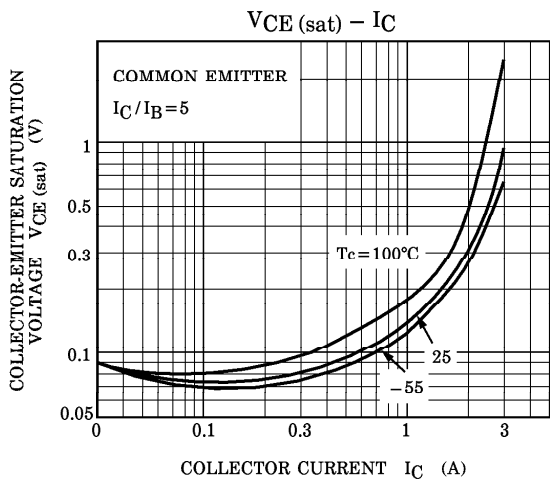
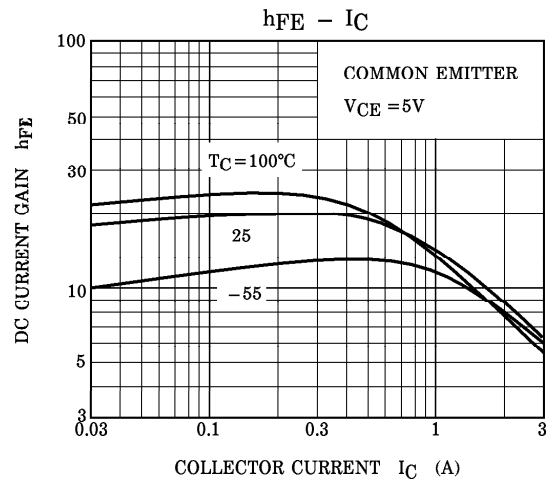
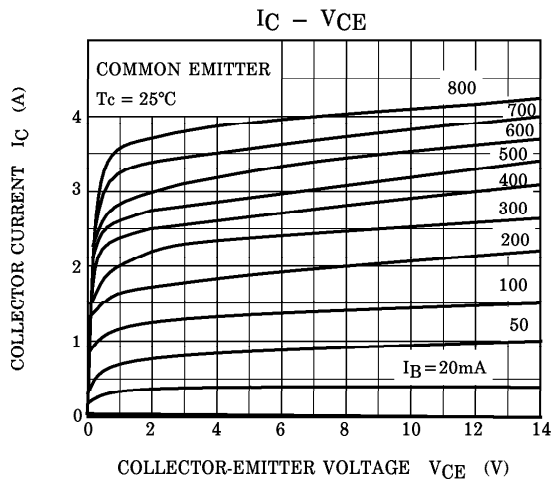
ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

Weight : 1.9g

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=800V, I_E=0$	—	—	100	$\mu A$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=7V, I_C=0$	—	—	1	mA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	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	$t_r$		—	—	1.0	$\mu s$
	Storage Time	$t_{stg}$		—	—	4.0	
	Fall Time	$t_f$		$I_{B1}=0.08A$ $I_{B1}=-0.20A$ DUTY CYCLE $\leq 1\%$	—	—	

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