

TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE

# 2SA1822

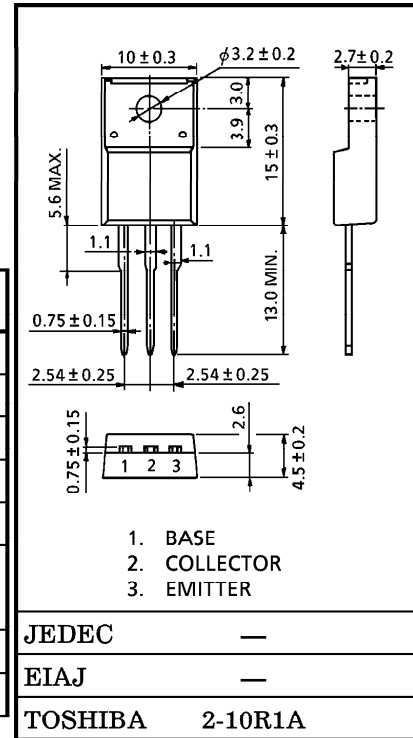
HIGH VOLTAGE SWITCHING APPLICATIONS  
HIGH SPEED DC-DC CONVERTER APPLICATION

Unit in mm

- Excellent Switching Times  
 $t_{on} = 1.0\mu s$  (Max.),  $t_f = 1.0\mu s$  (Max.) at  $I_C = -0.3A$
- High Collector Breakdown Voltage :  $V_{CEO} = -400V$

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	-400	V
Collector-Emitter Voltage		$V_{CEO}$	-400	V
Emitter-Base Voltage		$V_{EBO}$	-7	V
Collector Current		$I_C$	-1	A
Base Current		$I_B$	-0.5	A
Collector Power Dissipation	$T_a = 25^\circ C$	$P_C$	2.0	W
	$T_c = 25^\circ C$		25	
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$



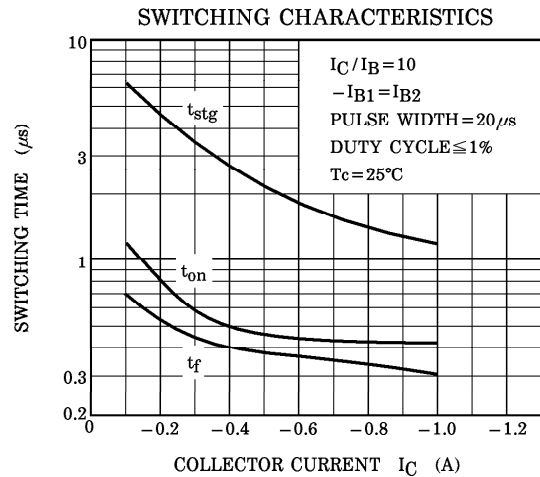
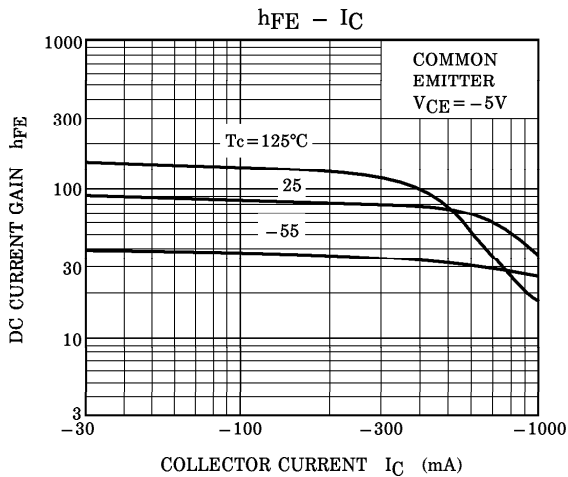
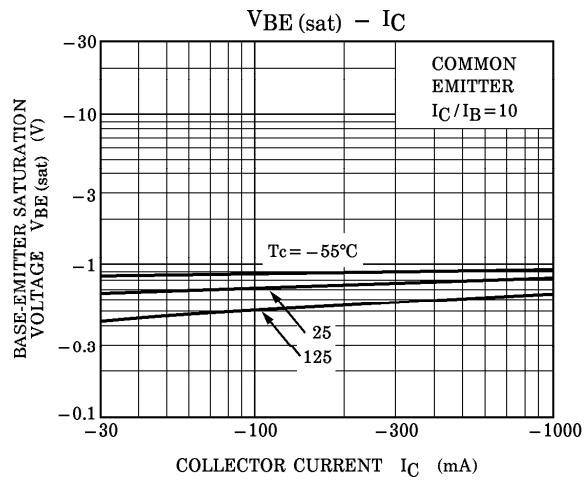
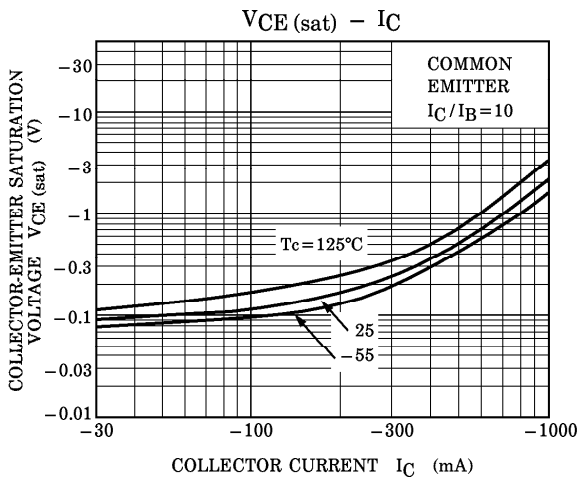
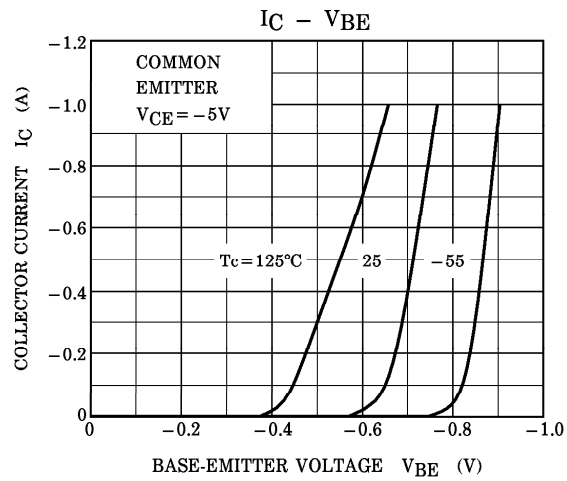
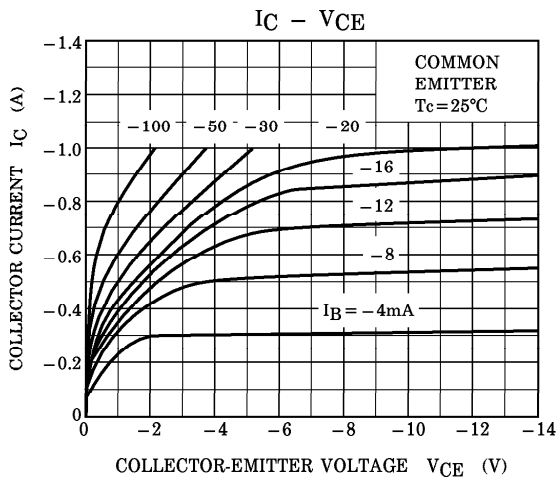
Weight : 1.7g

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

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB} = -400V, I_E = 0$	—	—	-1	$\mu A$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB} = -7V, I_C = 0$	—	—	-1	$\mu A$
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-400	—	—	V
DC Current Gain		$h_{FE}$	$V_{CE} = -5V, I_C = -0.3A$	30	—	100	
			$V_{CE} = -5V, I_C = -0.5A$	20	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = -0.3A, I_B = -30mA$	—	-0.25	-1.0	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = -0.3A, I_B = -30mA$	—	-0.75	-1.2	V
Switching Time	Rise Time	$t_{on}$	<p><math>-I_{B1} = I_{B2} = 30mA,</math> DUTY CYCLE &lt; 1%</p>	—	—	1.0	$\mu s$
	Storage Time	$t_{stg}$		—	—	5.0	
	Fall Time	$t_f$		—	—	1.0	

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