

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SD553

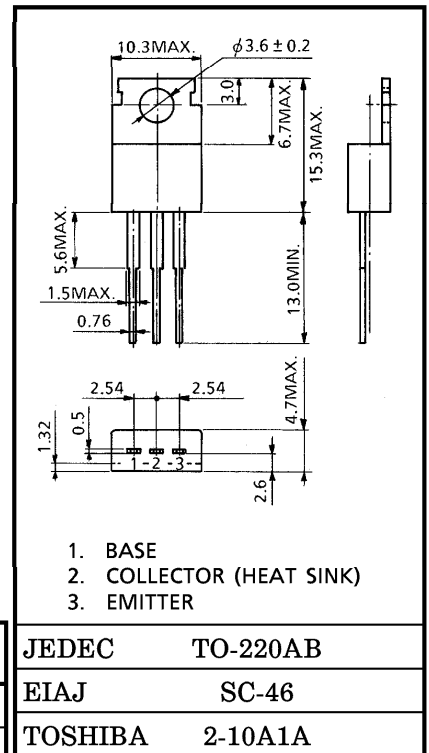
HIGH CURRENT SWITCHING APPLICATIONS

POWER AMPLIFIER APPLICATIONS

- Low Saturation Voltage : $V_{CE(sat)} = 0.4V$ (Max.) (at $I_C = 4A$)
- Complementary to 2SB553.

INDUSTRIAL APPLICATIONS

Unit in mm



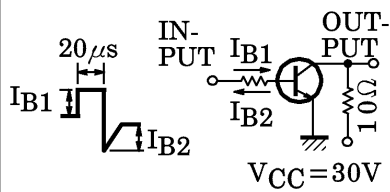
MAXIMUM RATINGS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	70	V
Collector-Emitter Voltage	V_{CE0}	50	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current	I_C	7	A
Base Current	I_B	1	A
Collector Power Dissipation	P_C	$T_a = 25^\circ C$	1.5
		$T_c = 25^\circ C$	40
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

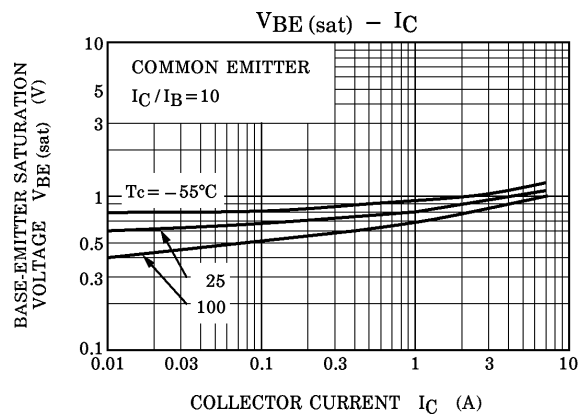
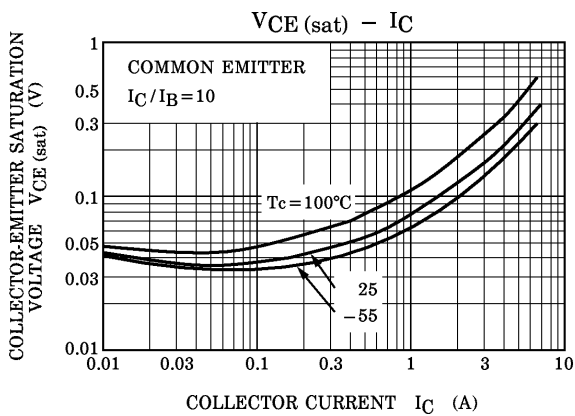
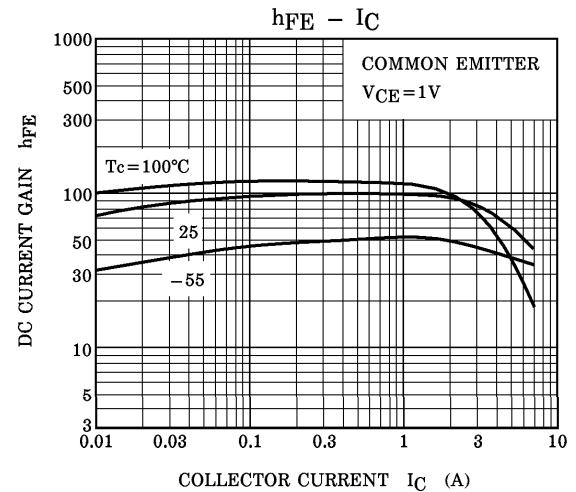
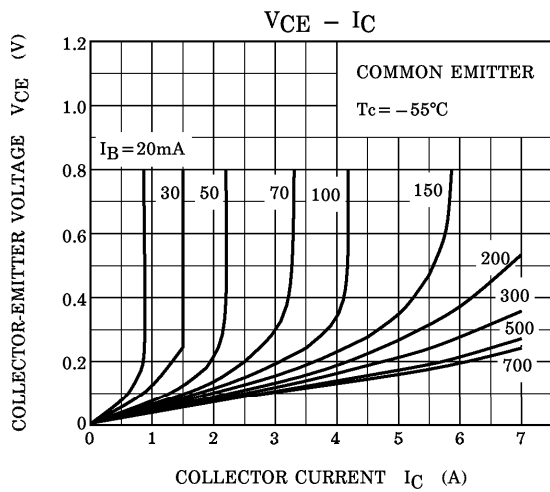
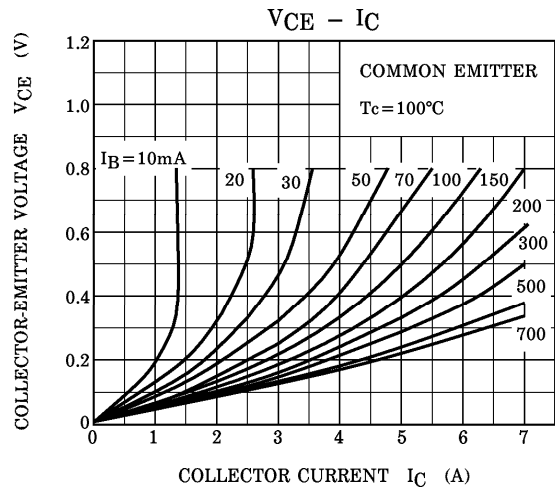
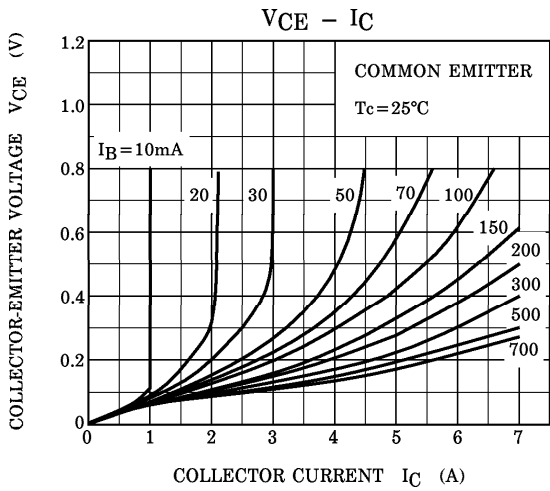
Weight : 1.9g

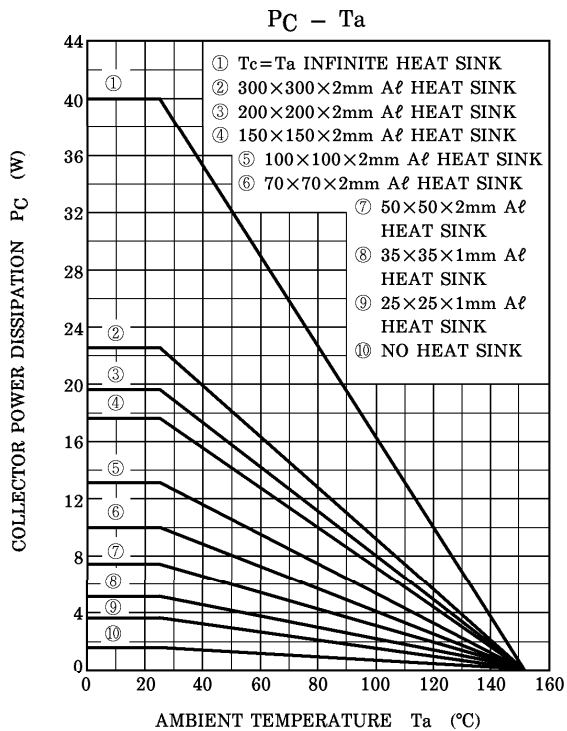
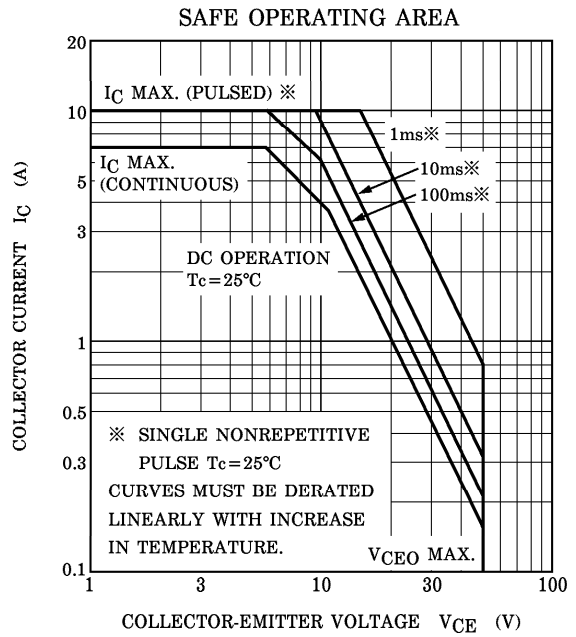
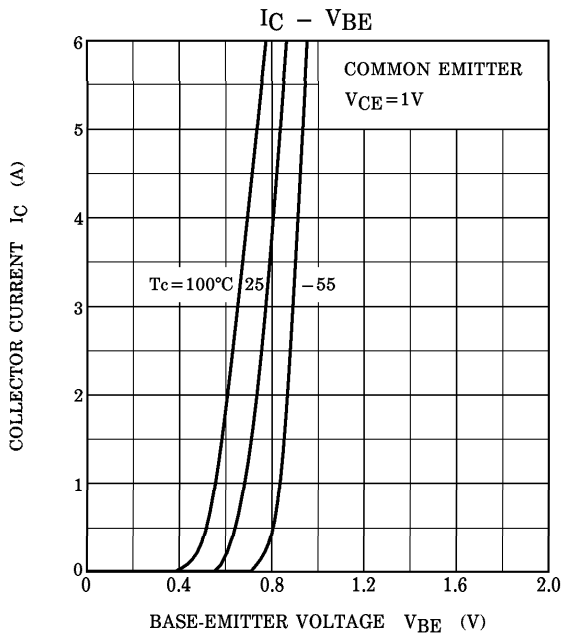
Mounting Kit No. AC75

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = 70V, I_E = 0$	—	—	30	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = 5V, I_C = 0$	—	—	50	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = 50mA, I_B = 0$	50	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)		$V_{CE} = 1V, I_C = 1A$	70	—	240	
	$h_{FE(2)}$		$V_{CE} = 1V, I_C = 4A$	30	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 4A, I_B = 0.4A$	—	0.2	0.4	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = 4A, I_B = 0.4A$	—	0.9	1.2	V
Transition Frequency		f_T	$V_{CE} = 4V, I_C = 1A$	—	10	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	250	—	pF
Switching Time	Turn-on Time	t_{on}	 <p>$I_{B1} = -I_{B2} = 0.3A,$ DUTY CYCLE $\leq 1\%$</p>	—	0.2	—	μs
	Storage Time	t_{stg}		—	2.5	—	
	Fall Time	t_f		—	0.5	—	

Note : $h_{FE(1)}$ Classification O : 70~140, Y : 120~240





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