

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

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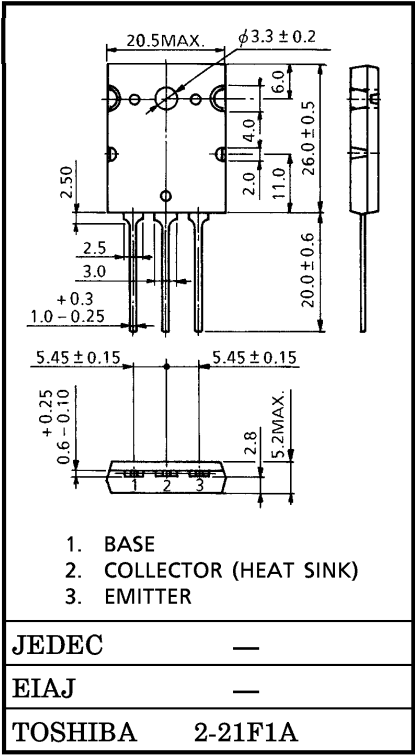
HIGH POWER AMPLIFIER APPLICATIONS.
HIGH POWER SWITCHING APPLICATIONS.

- High Power Dissipation : $P_C=200W$ ($T_c=25^{\circ}C$)
- High Collector Current : $I_C=25A$ (DC)
- High Speed Switching : $t_f=0.5\mu s$ (Typ.) ($I_C=15A$)
- Low Saturation Voltage : $V_{CE(sat)}=1.0V$ (Max.) ($I_C=15A$)

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

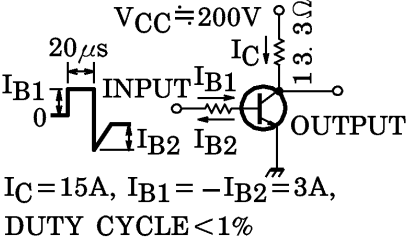
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	800	V
Collector-Emitter Voltage		V_{CEO}	350	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	25	A
	Pulse	I_{CP}	35	
Base Current	DC	I_B	10	A
	Pulse	I_{BP}	15	
Collector Power Dissipation ($T_c=25^{\circ}C$)		P_C	200	W
Junction Temperature		T_j	150	$^{\circ}C$
Storage Temperature Range		T_{stg}	$-55\sim150$	$^{\circ}C$

INDUSTRIAL APPLICATIONS
Unit in mm

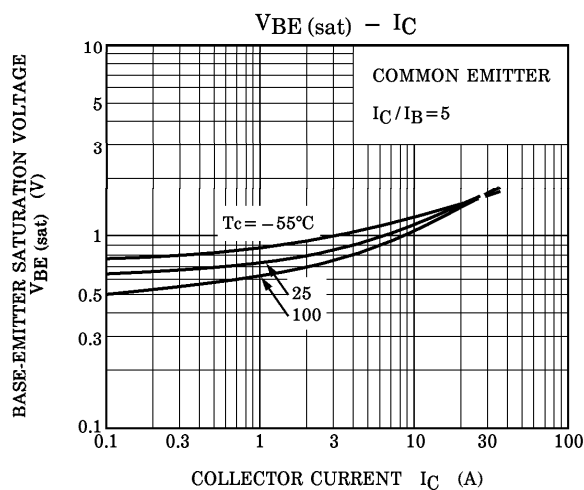
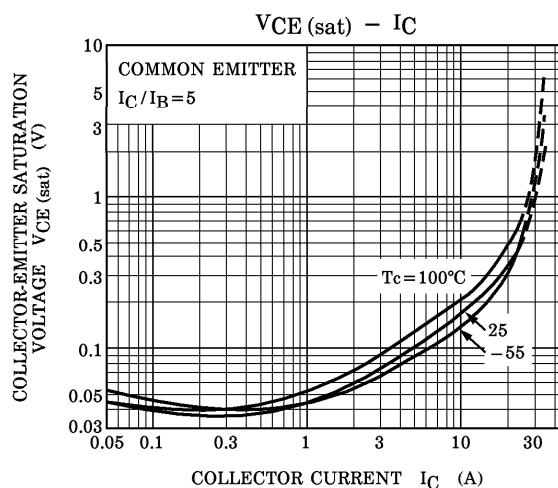
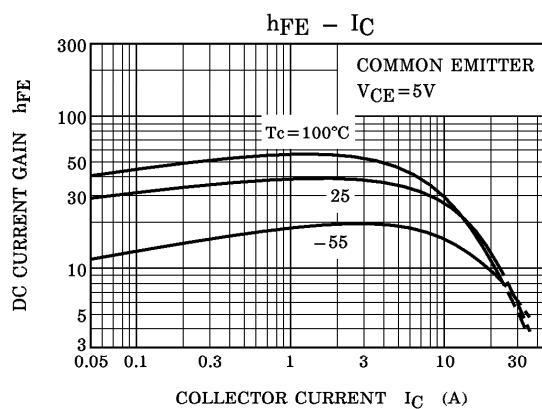
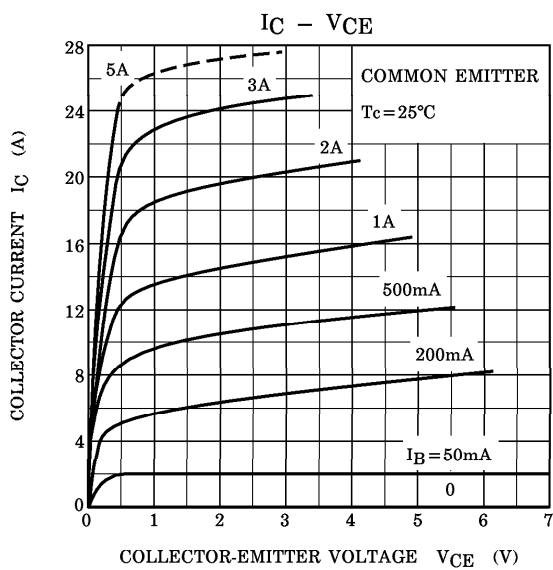
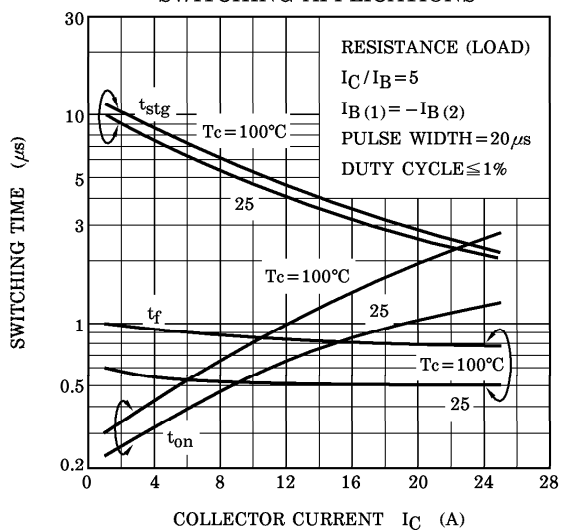


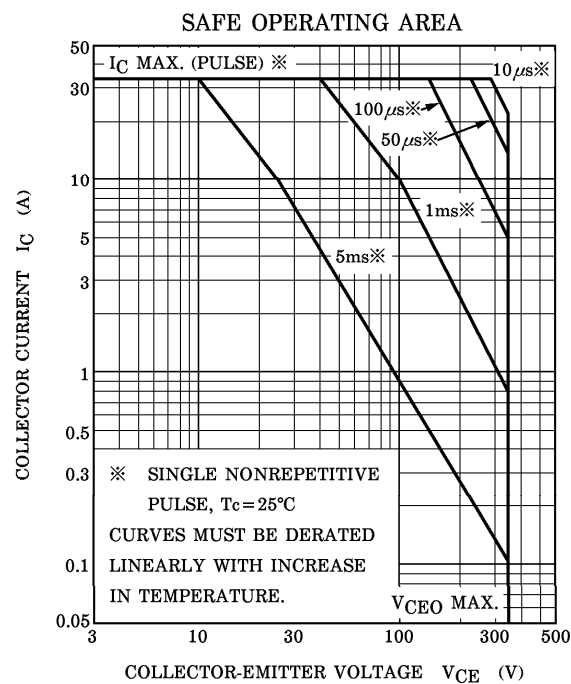
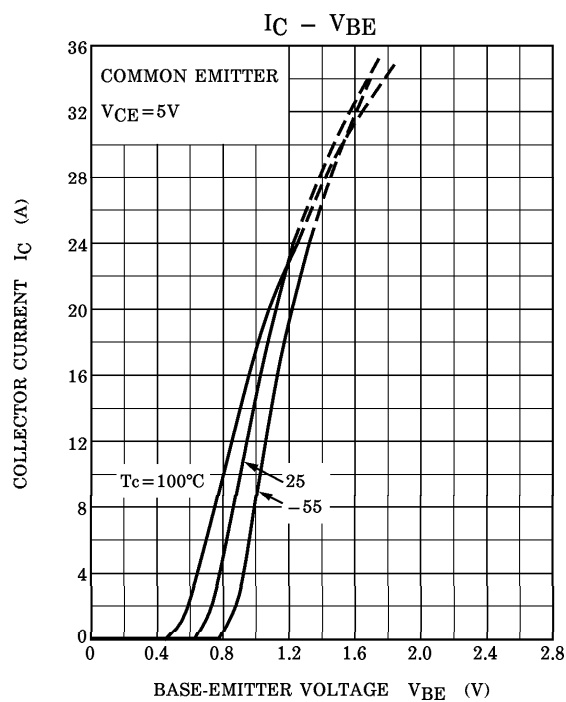
Weight : 9.75g (Typ.)

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = 800V, I_E = 0$	—	—	1	mA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = 7V, I_C = 0$	—	—	1	mA
Collector-Emitter Breakdown Voltage		$V_{(BR) CEO}$	$I_C = 10mA, I_B = 0$	350	—	—	V
DC Current Gain		$h_{FE (1)}$	$V_{CE} = 5V, I_C = 1A$	15	—	—	
		$h_{FE (2)}$	$V_{CE} = 5V, I_C = 25A$	6	—	—	
Collector-Emitter Saturation Voltage		$V_{CE (sat)}$	$I_C = 15A, I_B = 3A$	—	—	1.0	V
Base-Emitter Saturation Voltage		$V_{BE (sat)}$	$I_C = 15A, I_B = 3A$	—	—	1.7	V
Collector Output Capacitance		C_{ob}	$V_{CB} = 50V, I_E = 0, f = 1MHz$	—	170	—	pF
Transition Frequency		f_T	$V_{CE} = 10V, I_C = 1A$	—	6	—	MHz
Switching Time	Turn-on Time	t_{on}	 $V_{CC} = 200V$ 3Ω I_C $20\mu s$ I_{B1} I_{B2} $I_C = 15A, I_{B1} = -I_{B2} = 3A,$ $DUTY CYCLE < 1\%$	—	0.8	—	μs
	Storage Time	t_{stg}		—	3.0	—	
	Fall Time	t_f		—	0.5	—	

SWITCHING APPLICATIONS





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