TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

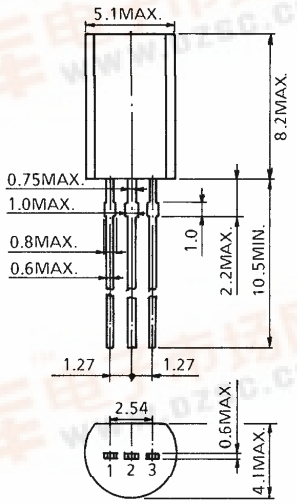
2SC3334

HIGH VOLTAGE SWITCHING APPLICATIONS.

COLOR TV CHROMA OUTPUT APPLICATIONS.

- High Voltage : V_{CEO} = 250V
- Low C_{re} : 1.8pF (Max.)
- Complementary to 2SA1321

Unit in mm



1. EMITTER
2. COLLECTOR
3. BASE

JEDEC	TO-92MOD
EIAJ	—
TOSHIBA	2-5J1A

Weight : 0.36g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	250	V
Collector-Emitter Voltage		V_{CEO}	250	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	50	mA
	Pulse	I_{CP}	100	
Base Current		I_B	20	mA
Collector Power Dissipation		P_C	0.9	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = 200V, I_E = 0	—	—	1.0	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5V, I_C = 0	—	—	1.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1mA, I_B = 0	250	—	—	V
DC Current Gain	h_{FE}	V_{CE} = 20V, I_C = 25mA	50	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 10mA, I_B = 1mA	—	—	1.5	V
Base-Emitter Voltage	V_{BE}	V_{CE} = 20V, I_C = 25mA	—	0.75	—	V
Transition Frequency	f_T	V_{CE} = 10V, I_C = 10mA	60	100	—	MHz
Reverse Transfer Capacitance	C_{re}	V_{CB} = 30V, I_E = 0, f = 1MHz	—	—	1.8	pF

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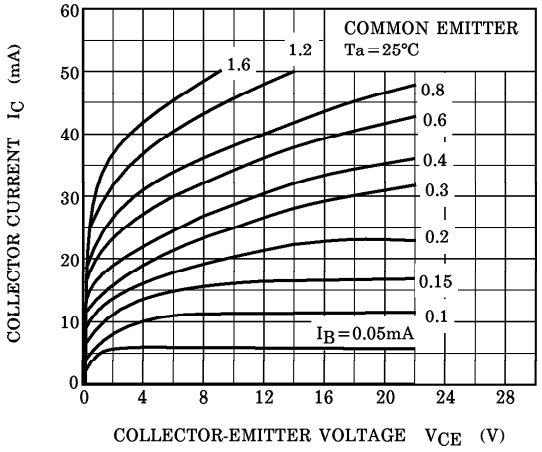
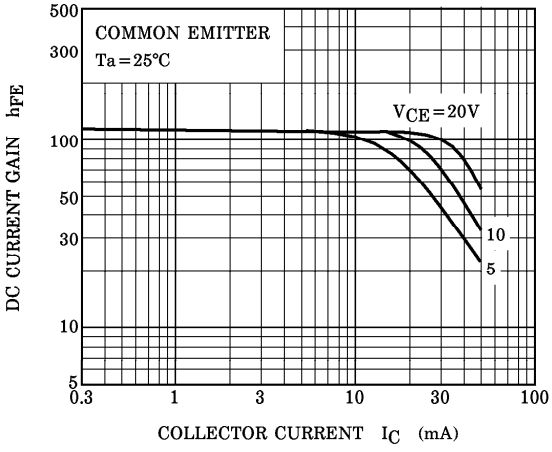
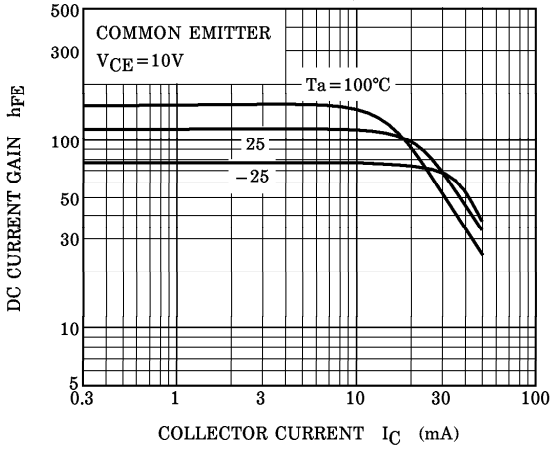
$I_C - V_{CE}$



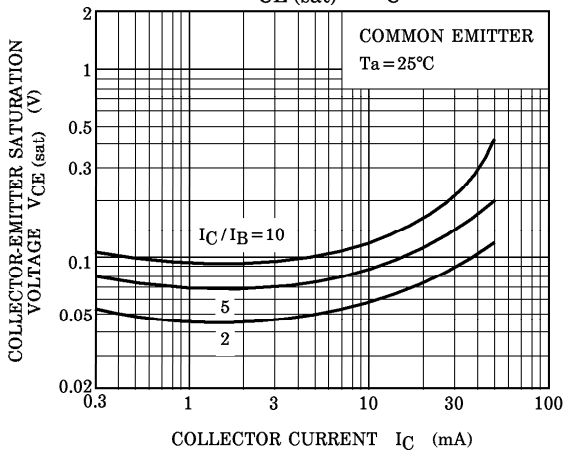
$h_{FE} - I_C$



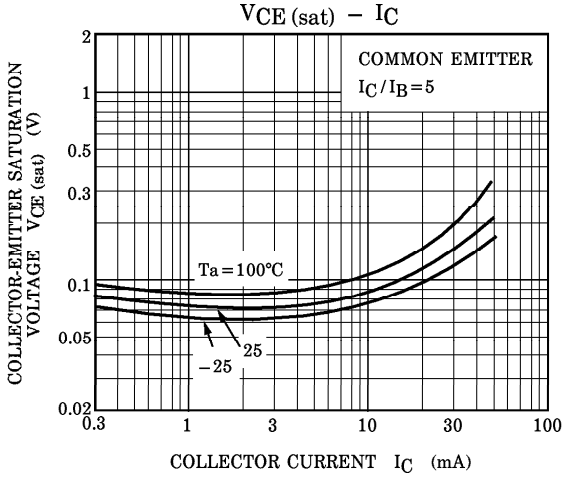
$h_{FE} - I_C$



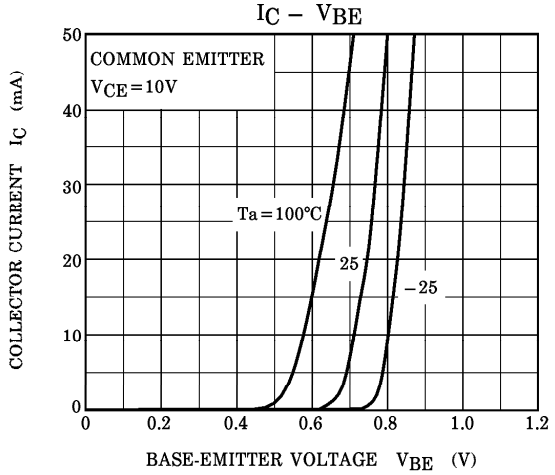
$V_{CE\,(sat)} - I_C$

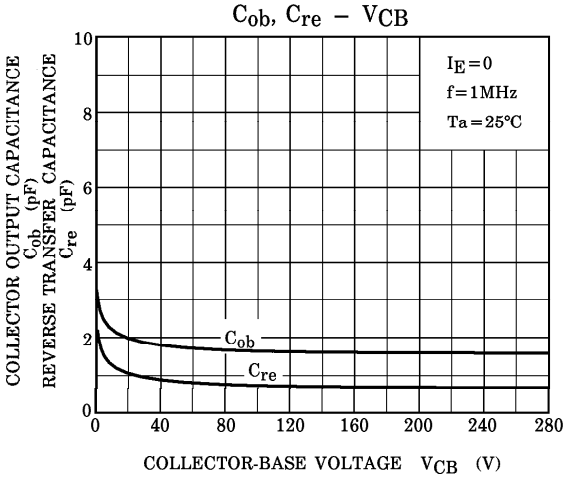


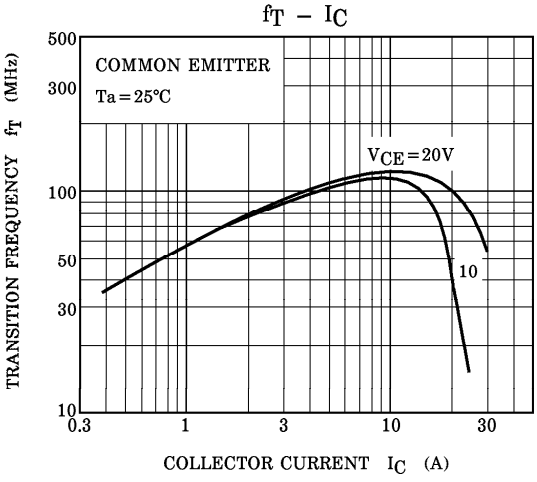
$V_{CE\,(sat)} - I_C$

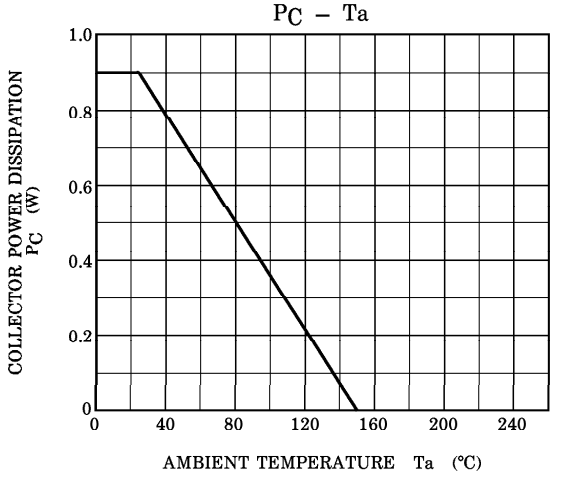


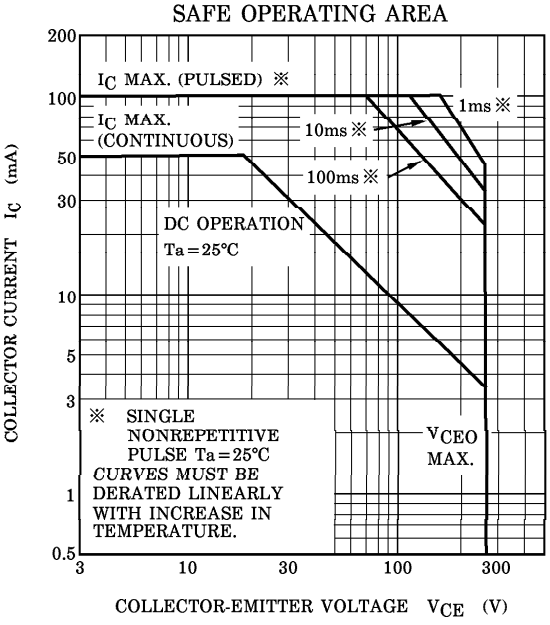
$I_C - V_{BE}$




C_{ob}, C_{re} – V_{CB}
COLLECTOR OUTPUT CAPACITANCE C_{ob} (pF)
REVERSE TRANSFER CAPACITANCE C_{re} (pF)
I_E = 0
f = 1MHz
Ta = 25°C
C_{ob}
C_{re}
COLLECTOR-BASE VOLTAGE V_{CB} (V)


f_T – I_C
COMMON EMITTER
Ta = 25°C
V_{CE} = 20V
10
TRANSITION FREQUENCY f_T (MHz)
COLLECTOR CURRENT I_C (A)


P_C – Ta
COLLECTOR POWER DISSIPATION P_C (W)
AMBIENT TEMPERATURE Ta (°C)


SAFE OPERATING AREA
I_C MAX. (PULSED) ※
I_C MAX. (CONTINUOUS)
1ms ※
10ms ※
100ms ※
DC OPERATION
Ta = 25°C
※ SINGLE NONREPETITIVE PULSE Ta = 25°C
CURVES MUST BE DERATED LINEARLY WITH INCREASE IN TEMPERATURE.
V_{CEO} MAX.
COLLECTOR CURRENT I_C (mA)
COLLECTOR-EMITTER VOLTAGE V_{CE} (V)