

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07687 D 7-33-89

2SC3308

SILICON NPNEPITAXIAL TYPE (PCT PROCESS)

HIGH CURRENT SWITCHING APPLICATIONS.

FEATURES:

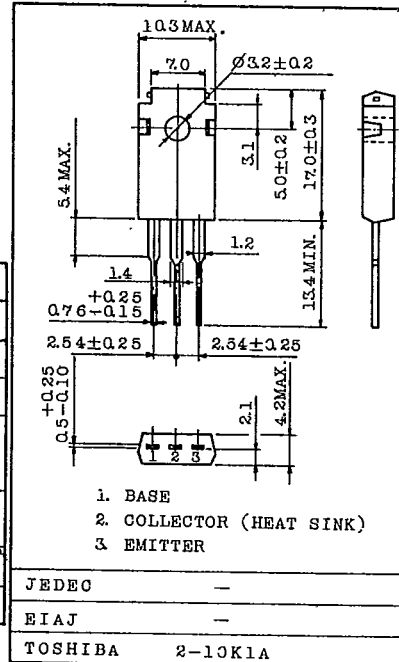
- Low Collector Saturation Voltage
: $V_{CE(sat)}=0.4V(\text{Max.})$ at $I_C=3A$
- High Speed Switching Time : $t_{stg}=1.0\mu s(\text{Typ.})$
- Complementary to 2SA1308.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	80	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current	DC	I_C	5
	Pulse	I_{CP}	8
Collector Power Dissipation ($T_c=25^\circ C$)	P_C	30	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ C$

INDUSTRIAL APPLICATIONS

Unit in mm

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=100V, I_E=0$	-	-	1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=7V, I_C=0$	-	-	1	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	80	-	-	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=1V, I_C=1A$	70	-	240	
	$h_{FE(2)}$	$V_{CE}=1V, I_C=3A$	40	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	-	0.2	0.4	V
	Base-Emitter	$V_{BE(sat)}$	-	0.9	1.2	
Transition Frequency	f_T	$V_{CE}=4V, I_C=1A$	-	120	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	80	-	pF
Switching Time	Turn-on Time	t_{on}	-	0.2	-	μs
	Storage Time	t_{stg}	-	1.0	-	
	Fall Time	t_f	-	0.1	-	

Switching Time Test Circuit Diagram:

Input pulse: $20\mu s$ (rise time), I_{B1} (base current), I_{B2} (base current), $I_{B1} = -I_{B2} = 0.15A$, DUTY CYCLE $\leq 1\%$.

Output: $V_{CC} = 30V$.

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

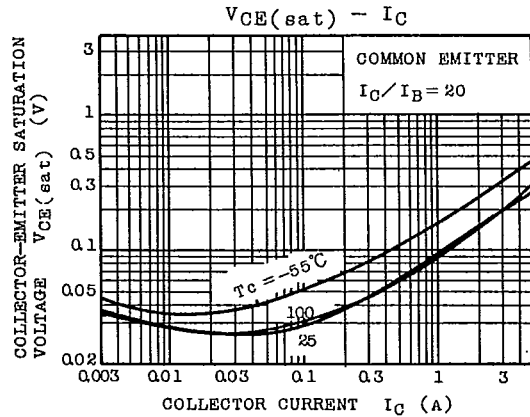
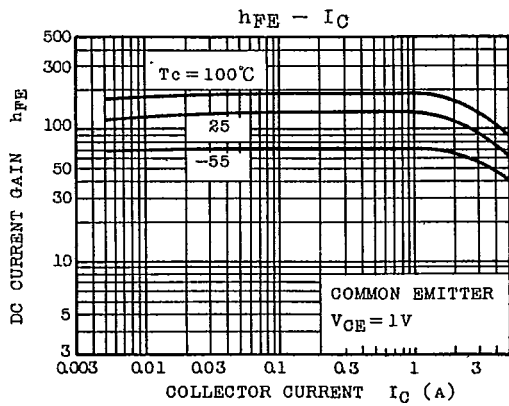
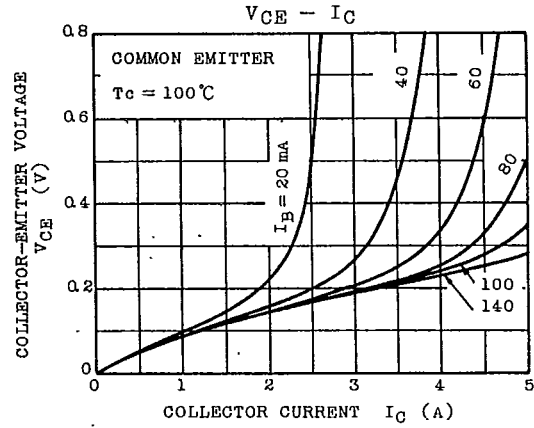
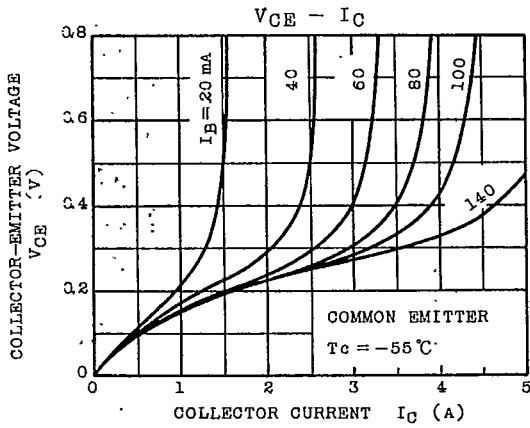
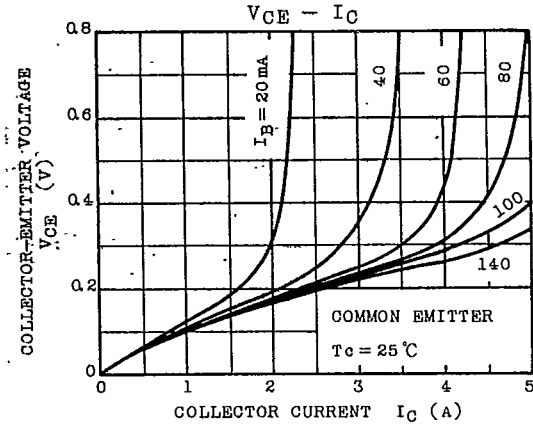
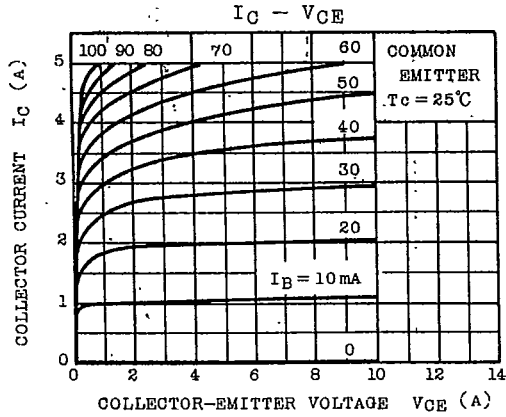
TOSHIBA CORPORATION

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