

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07677 DT-33-09

2SC3299

SILICON NPNEPITAXIAL TYPE (PCT PROCESS)

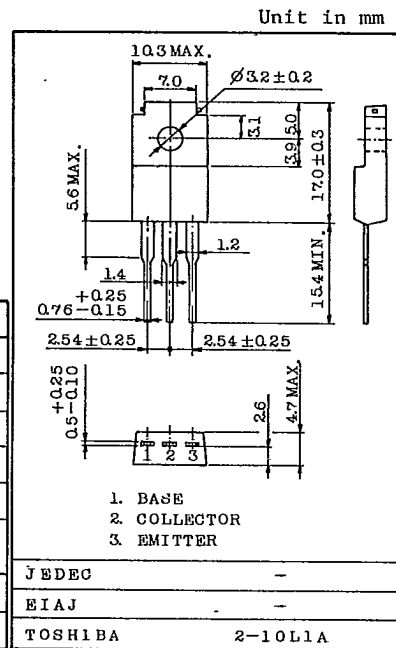
HIGH CURRENT SWITCHING APPLICATIONS.

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 2SA1307

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	5	A
Base Current	I_B	1	A
Collector Power Dissipation	P_C	$T_a=25^\circ C$	2.0
		$T_c=25^\circ C$	20
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ C$



Weight : 2.1g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=50V, I_E=0$	-	-	1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	1	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	50	-	-	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=1V, I_C=1A$	70	-	240	
	$h_{FE(2)}$	$V_{CE}=1V, I_C=3A$	30	-	-	
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}	-	0.1	-	μs
	Storage Time	t_{stg}	-	1.0	-	
	Fall Time	t_f	-	0.1	-	

I_{B1} INPUT I_{B2} OUTPUT
 $I_{B1} = -I_{B2} = 0.15A$
 $V_{CC} = 30V$
 $20\mu s$
 DUTY CYCLE $\leq 1\%$

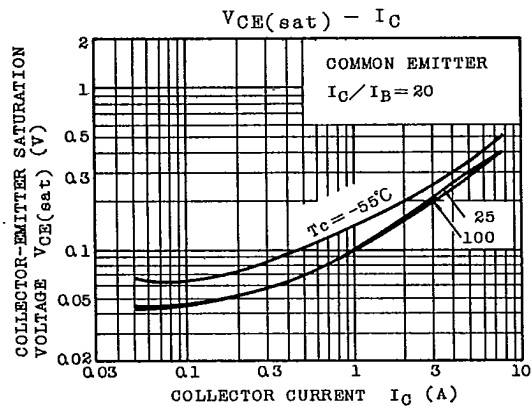
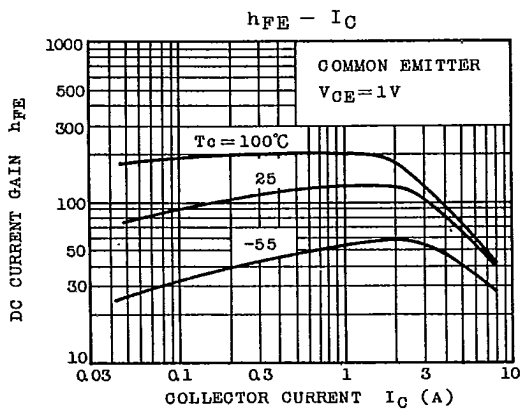
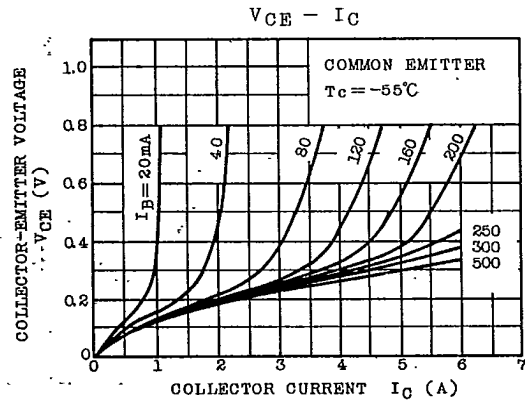
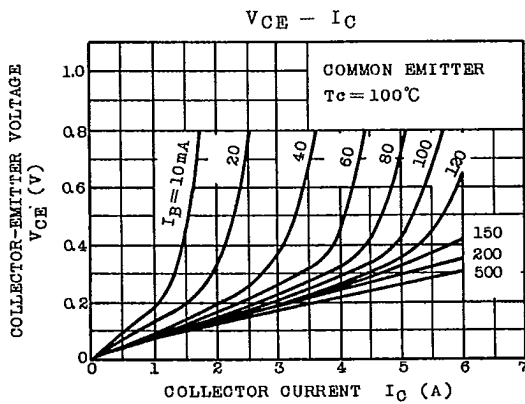
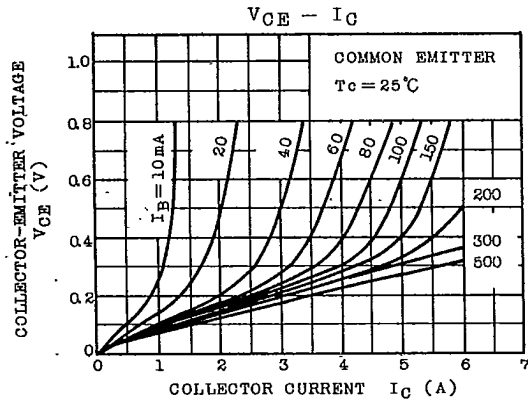
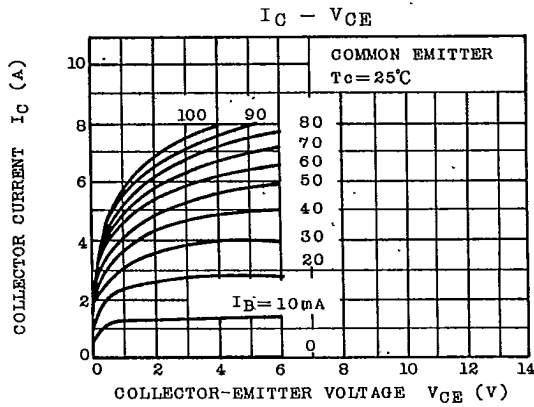
Note : $h_{FE(1)}$ Classification O : 70~140, Y : 120~240

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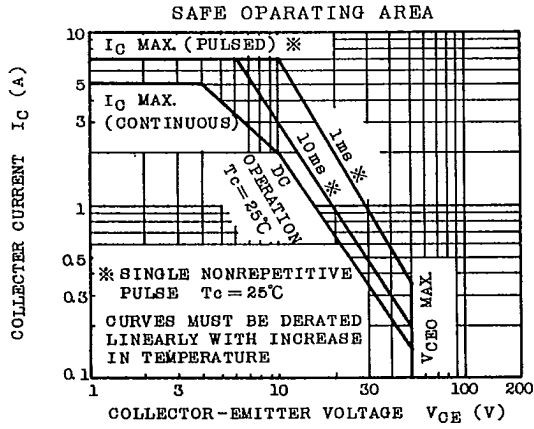
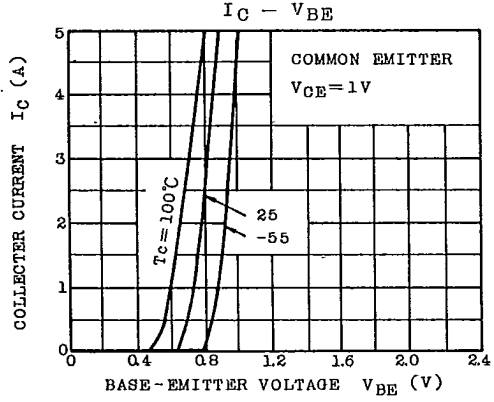
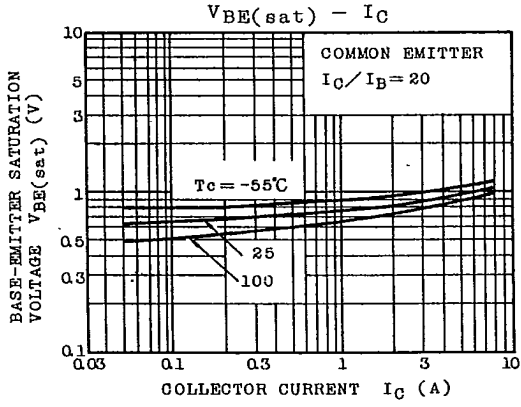
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