

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07308

DT-33-19

2SA1308

SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

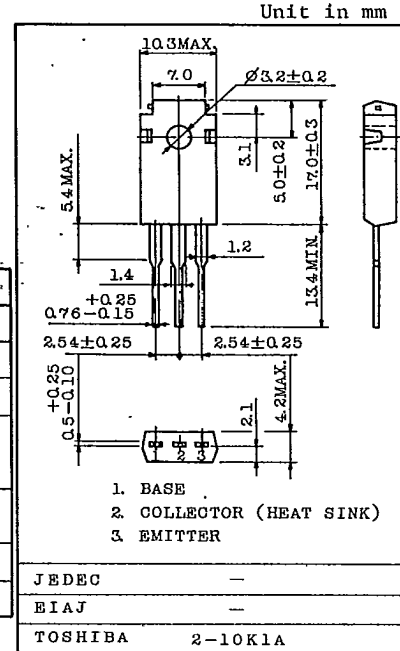
HIGH CURRENT SWITCHING APPLICATIONS.

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 2SC3308.

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CB0}	-100	V
Collector-Emitter Voltage		V_{CE0}	-80	V
Emitter-Base Voltage		V_{EB0}	-7	V
Collector Current	DC	I_C	-5	A
	Pulse	I_{CP}	-8	A
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	$^\circ C$

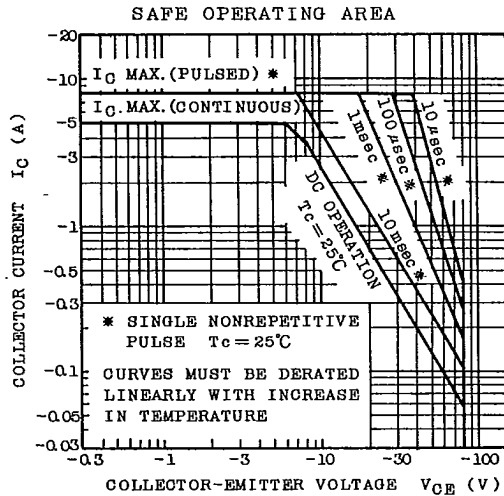
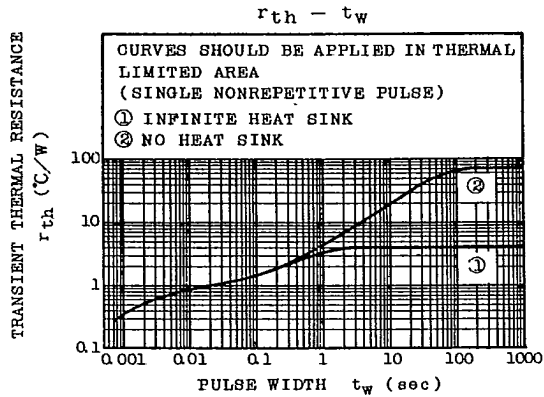
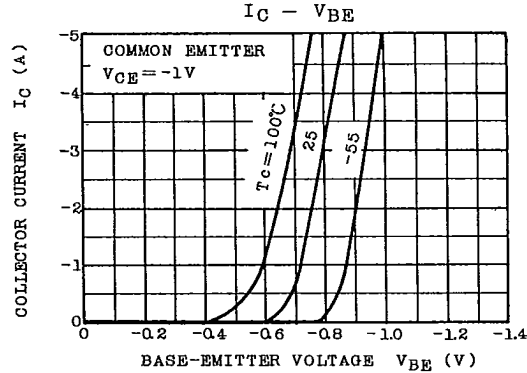
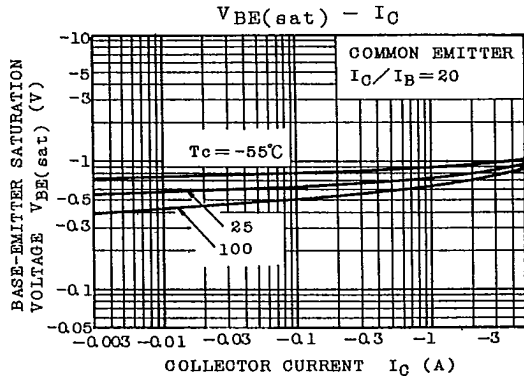
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CB0}	$V_{CB} = -100V, I_E = 0$	-	-	-1	μA
Emitter Cut-off Current		I_{EB0}	$V_{EB} = -7V, I_C = 0$	-	-	-1	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CE0}$	$I_C = -10mA, I_B = 0$	-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	$V_{CE(sat)}$	$I_C = -3A, I_B = -0.15A$	-	-0.2	-0.4	V
	Base-Emitter	$V_{BE(sat)}$	$I_C = -3A, I_B = -0.15A$	-	-0.9	-1.2	V
Transition Frequency		f_T	$V_{CE} = -4V, I_C = -1A$	-	60	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	-	200	-	pF
Switching Time	Turn-on Time	t_{on}	<p>20μs INPUT I_{B2} OUTPUT I_C I_{B1} I_{B1} I_{C0} $-I_{B1} = I_{B2} = 0.15A$ $V_{CC} = -30V$ DUTY CYCLE $\leq 1\%$</p>	-	0.2	-	μs
	Storage Time	t_{stg}		-	1.0	-	
	Fall Time	t_f		-	0.1	-	

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

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