

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07811 0 T-33-29

2SD842SILICON NPN TRIPLE DIFFUSED TYPE
(DARLINGTON POWER)

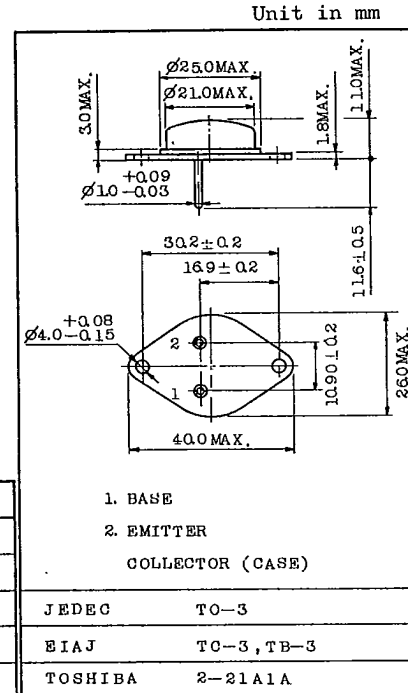
HIGH CURRENT SWITCHING APPLICATIONS.

FEATURES:

- . High Collector Current : $I_C = 30A$
- . High DC Current Gain
: $h_{FE}=1000$ (Min.), ($V_{CE}=5V, I_C=20A$)
- . Monolithic Construction with Built-In Base-Emitter
Shunt Resistor.

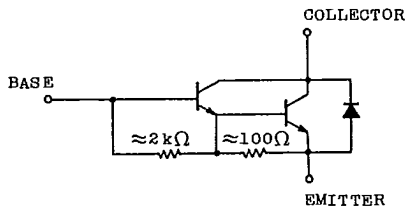
MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	80	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	30	A
Base Current	I_B	1	A
Collector Power Dissipation ($T_c=25^\circ C$)	P_C	150	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-65 ~ 150	$^\circ C$



Mounting kit No. AC73
Weight : 12.9g

EQUIVALENT CIRCUIT



TOSHIBA CORPORATION

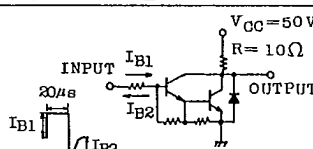
9097250 TOSHIBA (DISCRETE/OPTO)

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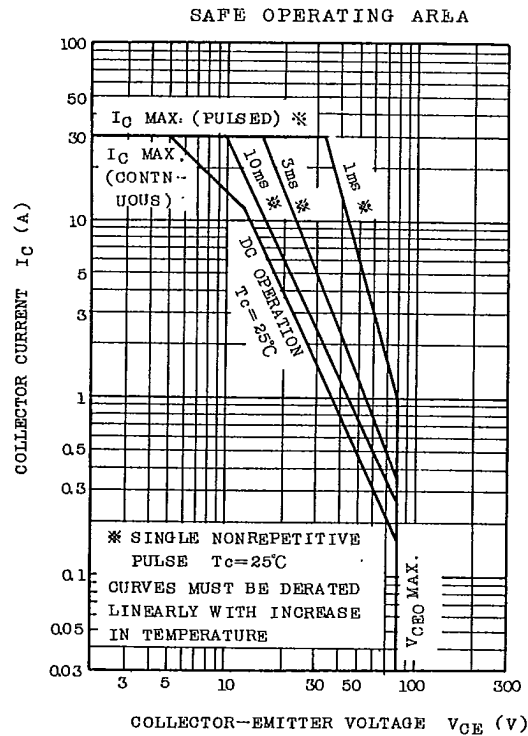
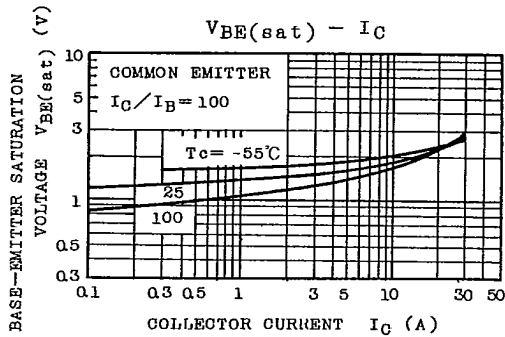
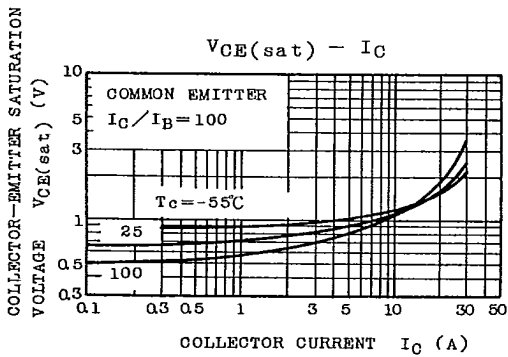
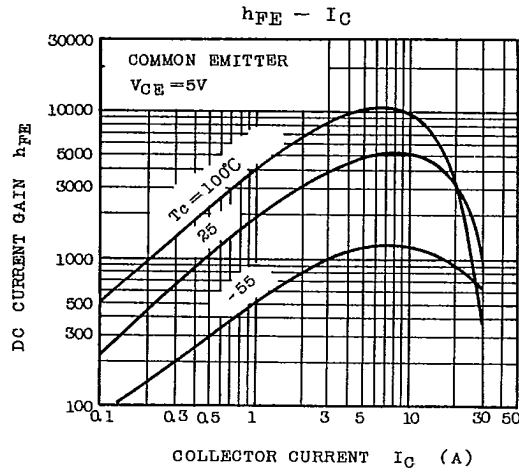
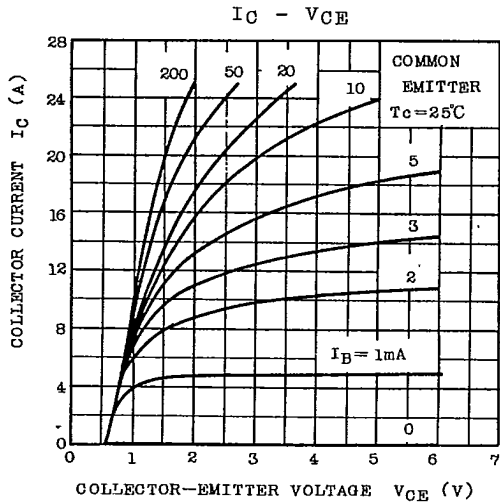
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ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current	I_{CBO}	$V_{CB}=80V, I_E=0$	-	-	100	μA	
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	10	mA	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=50mA, I_B=0$	80	-	-	V	
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=20A$	1000	-	-		
	$h_{FE(2)}$	$V_{CE}=5V, I_C=30A$	200	-	-		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=20A, I_B=0.2A$	-	-	3	V	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-	-	3.5	V	
Emitter-Collector Forward Voltage	V_{ECF}	$I_E=10A, I_B=0$	-	-	3	V	
Transition Frequency	f_T	$V_{CE}=5V, I_C=1A$	-	14	-	MHz	
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	280	-	pF	
Switching Time	Turn-on Time	t_{on}		-	0.7	-	μs
	Storage Time	t_{stg}		-	8	-	
	Fall Time	t_f		$I_{B1} = -I_{B2} = 0.01A$ DUTY CYCLE $\leq 1\%$	-	2.5	

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