

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07711 D T-33-29

2SD524

SILICON NPN TRIPLE DIFFUSED TYPE
(DARLINGTON POWER)

HIGH POWER SWITCHING APPLICATIONS.

FEATURES:

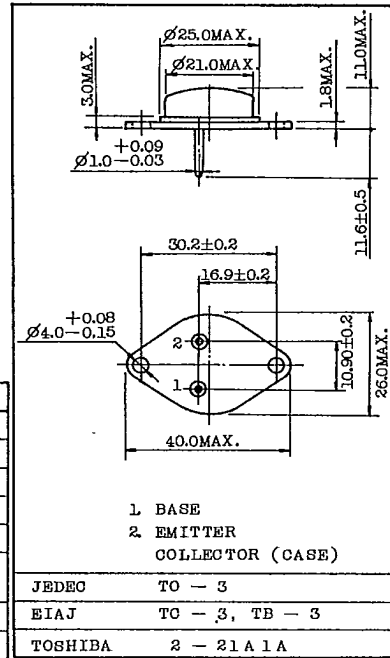
- High DC Current Gain
: $h_{FE}=2000$ (Min.) ($V_{CE}=3V, I_C=5A$)
- Low Saturation Voltage
: $V_{CE(sat)}=1.5V$ (Max.) ($I_C=5A$)
- Monolithic Construction With Built-In Base-Emitter Shunt Resistor.

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	15	A
Base Current	I_B	0.2	A
Collector Power Dissipation ($T_c=25^\circ C$)	P_C	100	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-65~150	$^\circ C$

INDUSTRIAL APPLICATIONS

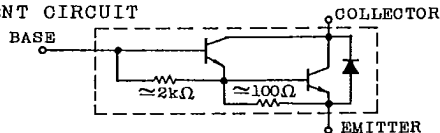
Unit in mm



Mounting Kit No. AC73

Weight : 12.9g

EQUIVALENT CIRCUIT



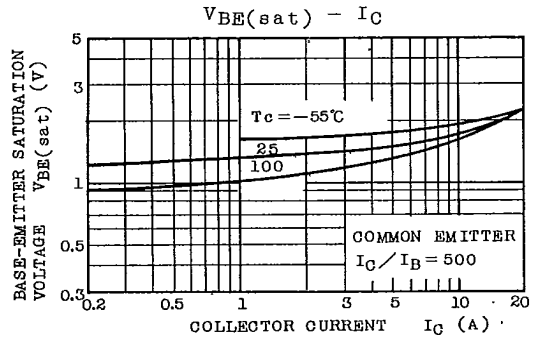
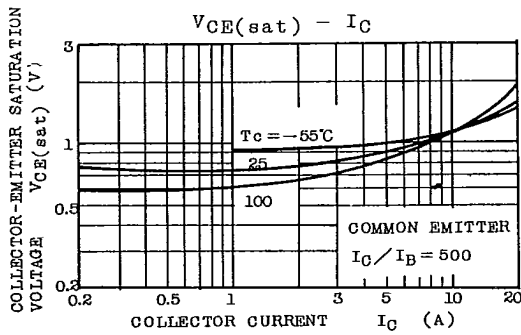
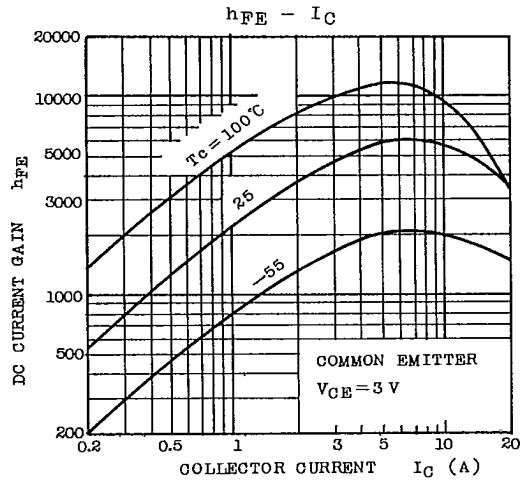
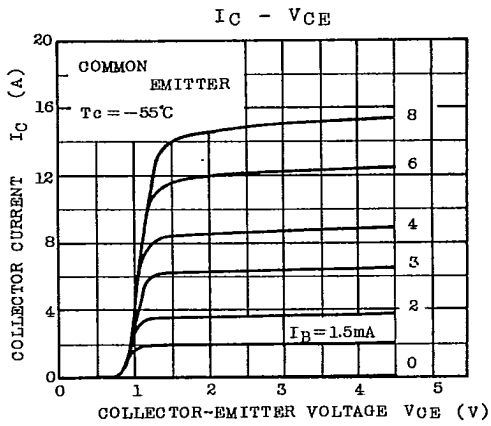
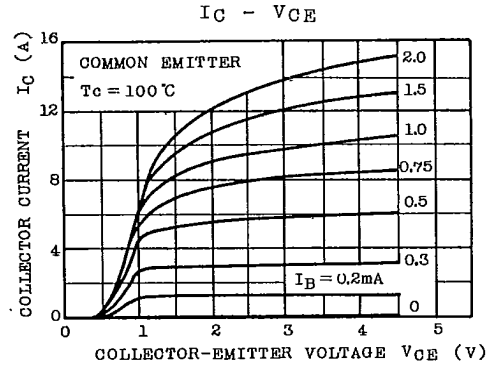
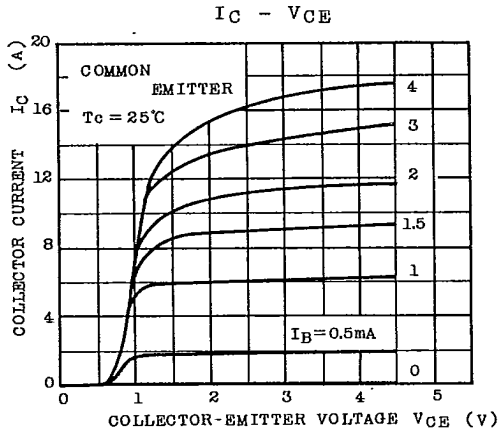
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

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	$h_{FE(1)}$	$V_{CE}=3V, I_C=5A$	2000	-	-	
	$h_{FE(2)}$	$V_{CE}=3V, I_C=15A$	1000	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}(1)$	$I_C=5A, I_B=10mA$	-	-	1.5	V
	$V_{CE(sat)}(2)$	$I_C=15A, I_B=30mA$	-	-	2.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=5A, I_B=10mA$	-	-	2.5	V
Switching Time	Turn-on Time	t_{on}	-	0.8	-	μs
	Storage Time	t_{stg}	-	4.0	-	μs
	Fall Time	t_f	-	3.0	-	μs

$I_{B1} = -I_{B2} = 10mA$
 DUTY CYCLE $\leq 1\%$
 $V_{CC} = 50V$

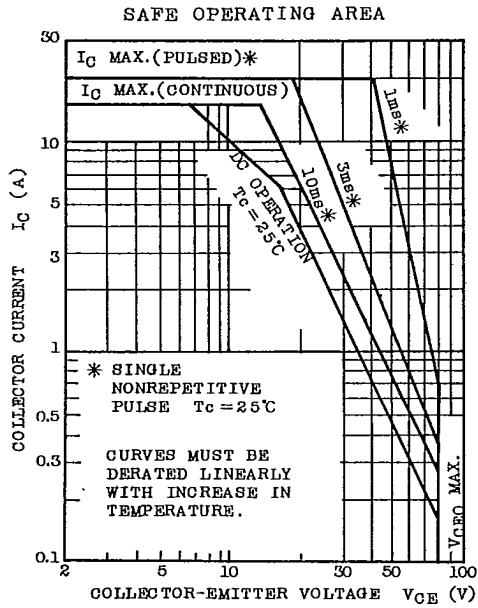
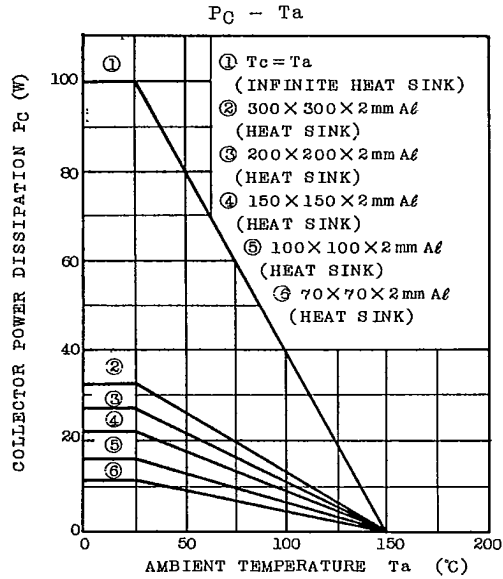
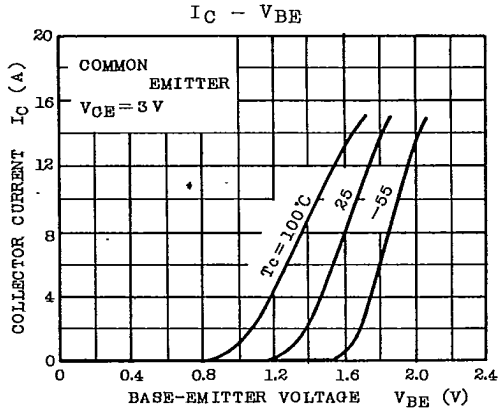
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