

9097250 TOSHIBA (DISCRETE/OPTO)  
SILICON NPN TRIPLE DIFFUSED TYPE  
(DARLINGTON POWER)

56C 07708 D T-33-29

# 2SD523

HIGH POWER SWITCHING APPLICATIONS.

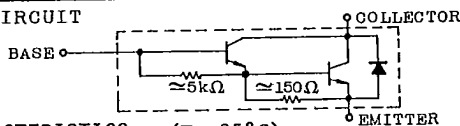
FEATURES:

- High DC Current Gain  
:  $h_{FE}=2000$  (Min.) ( $V_{CE}=3V, I_C=3A$ )
- Low Saturation Voltage  
:  $V_{CE(sat)}=1.5V$  (Max.) ( $I_C=3A$ )
- 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	$I_C$	7	A
Base Current	$I_B$	0.2	A
Collector Power Dissipation ( $T_c=25^\circ C$ )	$P_C$	50	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	$-65 \sim 150$	$^\circ C$

EQUIVALENT CIRCUIT

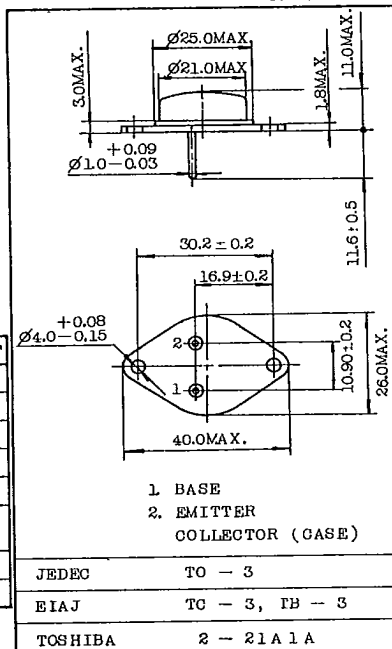


ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=80V, I_E=0$	-	-	100	$\mu A$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	3	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=50mA, I_B=0$	80	-	-	V
DC Current Gain		$h_{FE(1)}$	$V_{CE}=3V, I_C=3A$	2000	-	15000	
		$h_{FE(2)}$	$V_{CE}=3V, I_C=7A$	1000	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)1}$	$I_C=3A, I_B=6mA$	-	0.9	1.5	V
		$V_{CE(sat)2}$	$I_C=7A, I_B=14mA$	-	1.2	2.0	
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=3A, I_B=6mA$	-	1.5	2.5	V
Switching Time	Turn-On Time	$t_{on}$		-	0.8	-	$\mu s$
	Storage Time	$t_{stg}$		-	3.0	-	
	Fall Time	$t_f$		-	2.5	-	

INDUSTRIAL APPLICATIONS

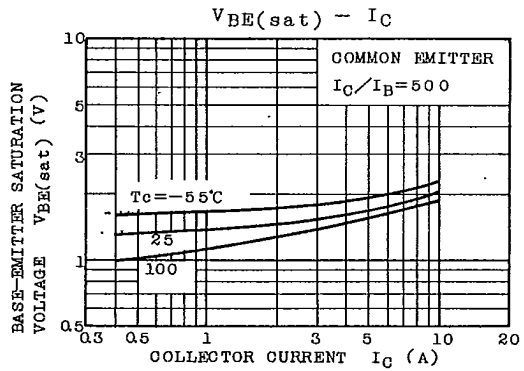
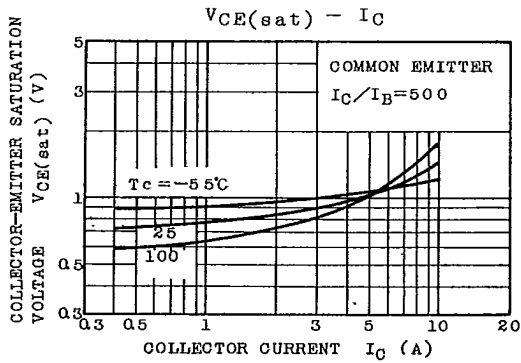
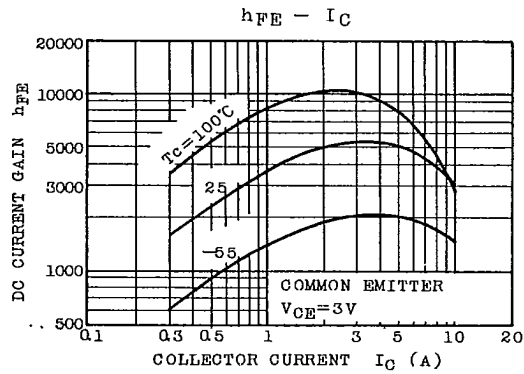
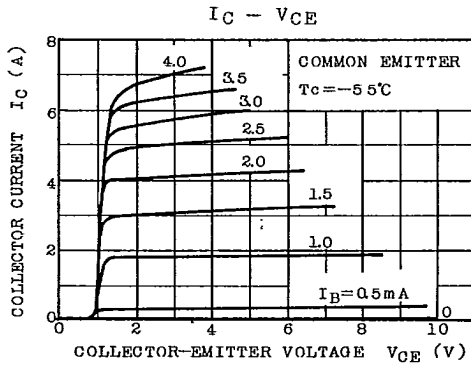
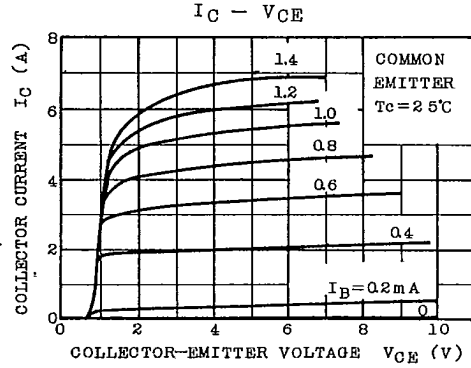
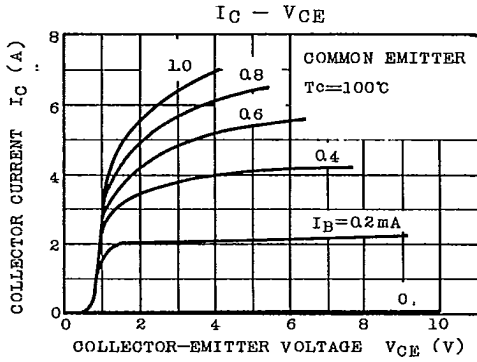
Unit in mm



Mounting Kit No. AC73  
Weight : 12g

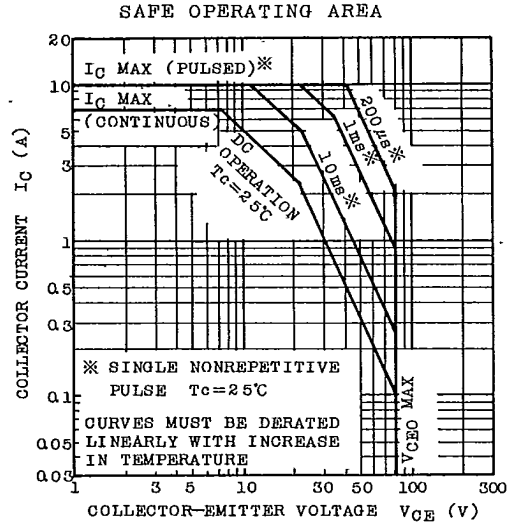
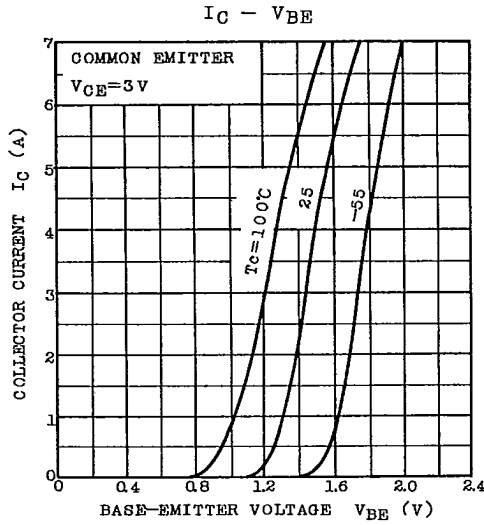
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