

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07516 07-33-07

SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

**2SC2270**

STROBO FLASH APPLICATIONS.

MEDIUM POWER AMPLIFIER APPLICATIONS.

FEATURES:

- High DC Current Gain  
:  $h_{FE}=140\sim 450$  ( $V_{CE}=2V$ ,  $I_C=0.5A$ )  
 $h_{FE}=70$  (Min.) ( $V_{CE}=2V$ ,  $I_C=4A$ )
- Low Saturation Voltage  
:  $V_{CE(sat)}=1.0V$  (Max.) ( $I_C=4A$ ,  $I_B=0.1A$ )
- High Collector Power Dissipation  
:  $P_C=1.0W$  ( $T_c=25^\circ C$ ),  $P_C=1.0W$  ( $T_a=25^\circ C$ )

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	50	V
Collector-Emitter Voltage		$V_{CES}$	40	V
		$V_{CEO}$	20	
Emitter-Base Voltage		$V_{EBO}$	8	V
Collector Current	DC	$I_C$	5	A
	Pulsed (Note 1)	$I_{CP}$	8	A
Emitter Current	DC	$I_E$	-5	A
	Pulsed (Note 1)	$I_{EP}$	-8	
Collector Power Dissipation	$T_a=25^\circ C$	$P_C$	1.0	W
	$T_c=25^\circ C$		10	
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$

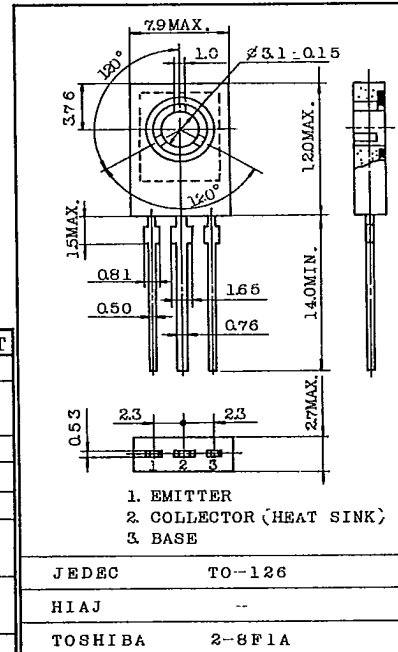
Note 1 : Pulse Test :  
Pulse Width = 10ms (Max.)  
Duty Cycle = 30 % (Max.)

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=40V$ , $I_E=0$	-	-	100	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=8V$ , $I_C=0$	-	-	100	nA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA$ , $I_B=0$	20	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA$ , $I_C=0$	8	-	-	V
DC Current Gain	$h_{FE(1)}$ (Note 2)	$V_{CE}=2V$ , $I_C=0.5A$	140	-	450	
	$h_{FE(2)}$	$V_{CE}=2V$ , $I_C=4A$	70	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4A$ , $I_B=0.1A$	-	-	1.0	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=2V$ , $I_C=4A$	-	-	1.5	V
Transition Frequency	$f_T$	$V_{CE}=2V$ , $I_C=0.5A$	-	100	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V$ , $I_E=0$ , $f=1MHz$	-	40	-	pF

Note 2 :  $h_{FE(1)}$  Classification A : 140~240, B : 200~330, C : 300~450

Unit in mm



JEDEC TO-126

HIAJ

TOSHIBA 2-8F1A

Mounting Kit No. AC46C

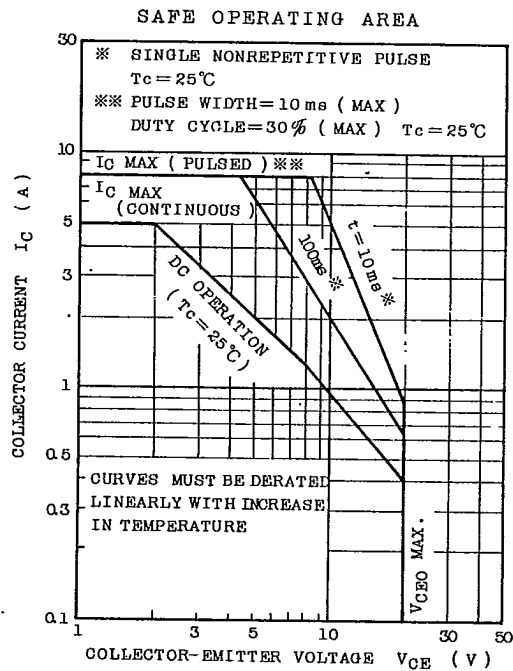
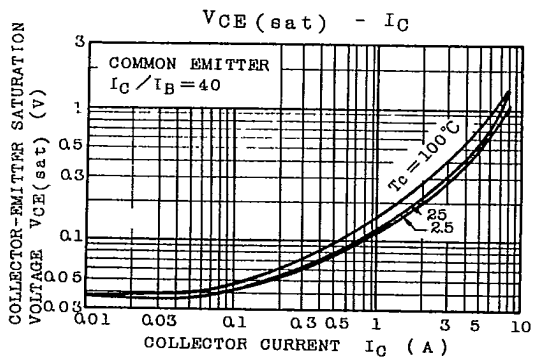
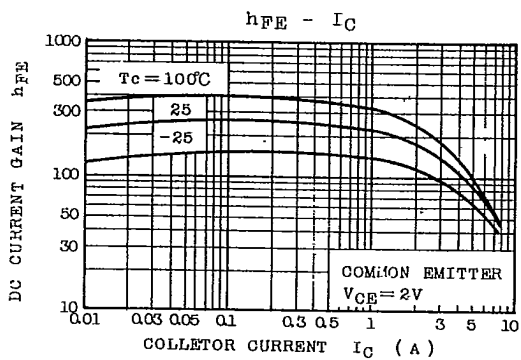
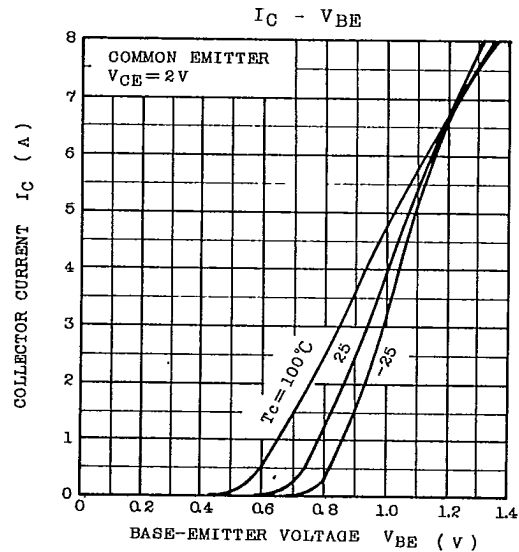
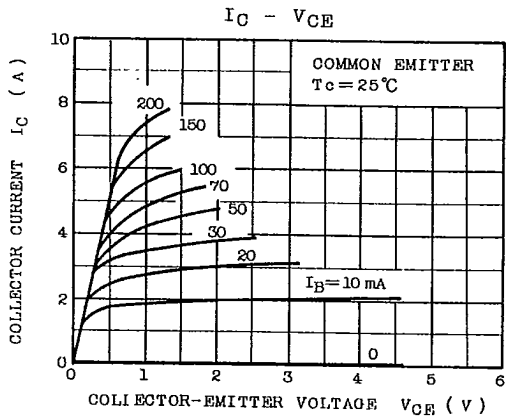
Weight : 0.72g

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