

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC2500

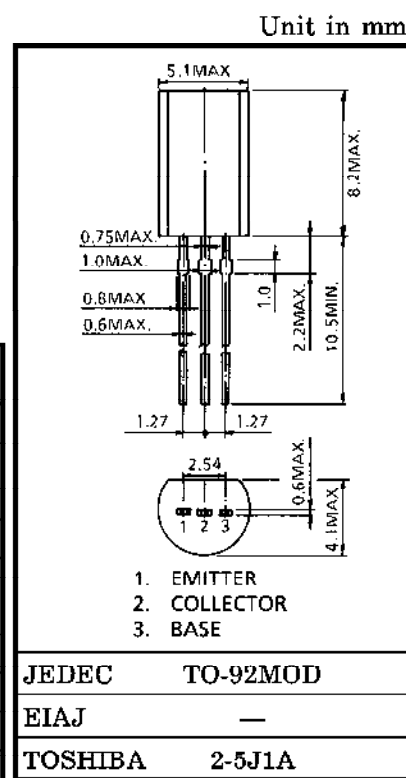
STROBE FLASH APPLICATIONS.

MEDIUM POWER AMPLIFIER APPLICATIONS.

- High DC Current Gain and Excellent h_{FE} Linearity
 - : $h_{FE}(1)=140\sim600$ ($V_{CE}=1V$, $I_C=0.5A$)
 - : $h_{FE}(2)=70$ (Min.), 200 (Typ.) ($V_{CE}=1V$, $I_C=2A$)
- Low Saturation Voltage
 - : $V_{CE(sat)}=0.5V$ (Max.) ($I_C=2A$, $I_B=50mA$)

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	30	V
Collector-Emitter Voltage		V_{CES}	30	V
		V_{CEO}	10	
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current	DC	I_C	2	A
	Pulsed (Note 1)	I_{CP}	5	
Base Current		I_B	0.5	A
Collector Power Dissipation		P_C	900	mW
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	$-55\sim150$	$^\circ C$

Note 1 : Pulse Width $\leq 10ms$, Duty Cycle $\leq 30\%$ 

Weight : 0.36g

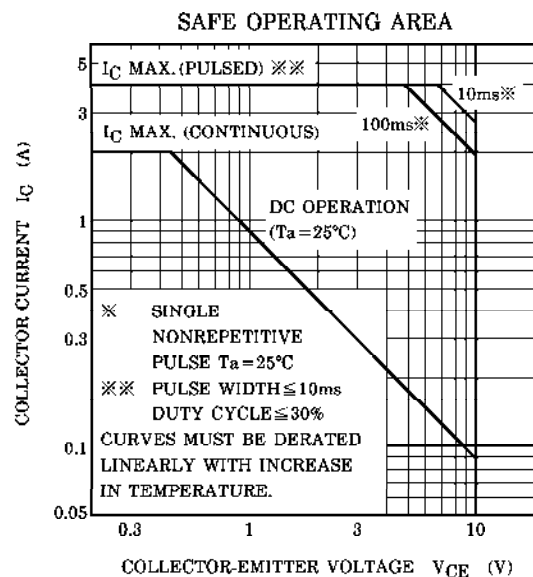
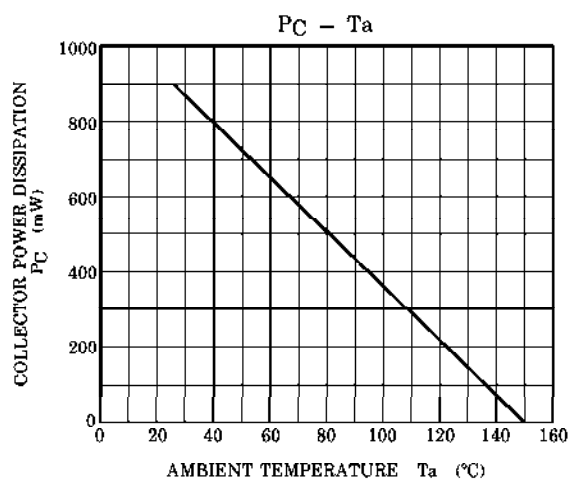
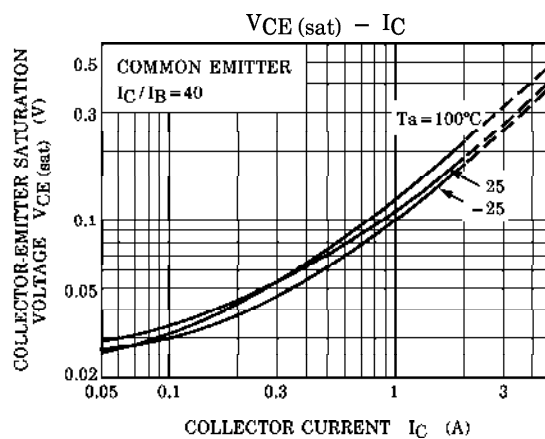
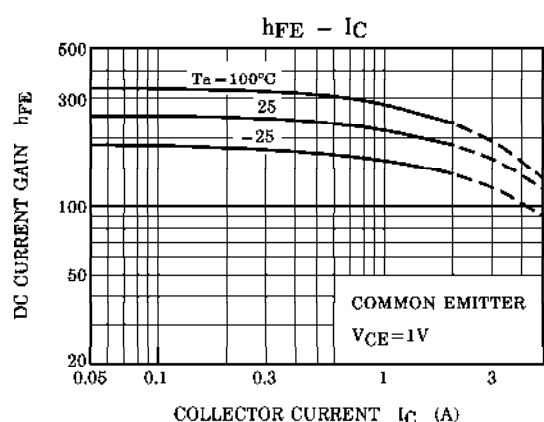
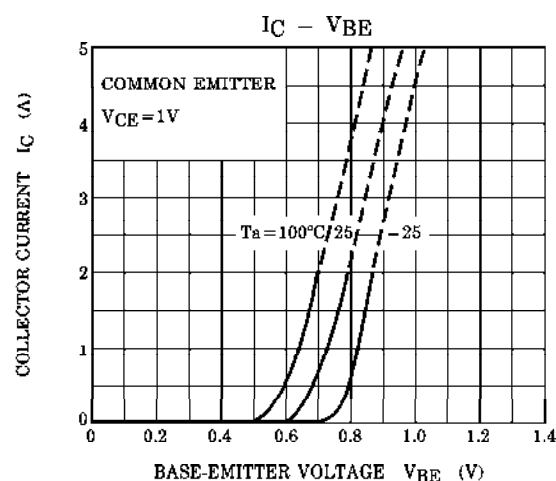
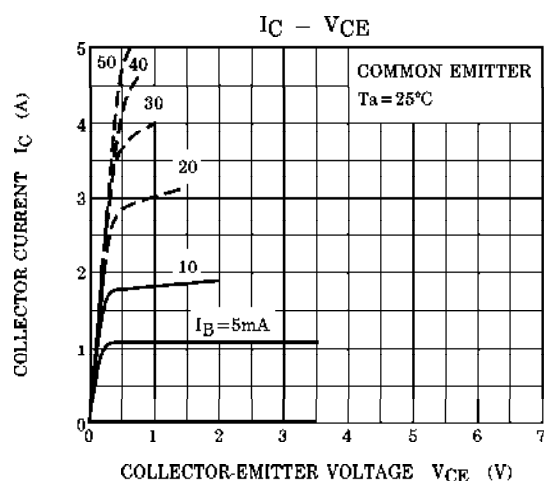
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=30V$, $I_E=0$	—	—	100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=6V$, $I_C=0$	—	—	100	nA
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$, $I_B=0$	10	—	—	V
Emitter-Base Breakdown Voltage	V_{EBO}	$I_E=1mA$, $I_C=0$	6	—	—	V
DC Current Gain	$h_{FE}(1)$ (Note 2)	$V_{CE}=1V$, $I_C=0.5A$	140	—	600	
	$h_{FE}(2)$	$V_{CE}=1V$, $I_C=2A$	70	200	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2A$, $I_B=50mA$	—	0.2	0.5	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=1V$, $I_C=2A$	—	0.86	1.5	V
Transition Frequency	f_T	$V_{CE}=1V$, $I_C=0.5A$	—	150	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$, $I_E=0$, $f=1MHz$	—	27	—	pF

Note 2 : $h_{FE}(1)$ Classification A : 140~240, B : 200~330, C : 300~450, D : 420~600

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