

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC2982

STOROBO FLASH APPLICATIONS

MEDIUM POWER AMPLIFIER APPLICATIONS

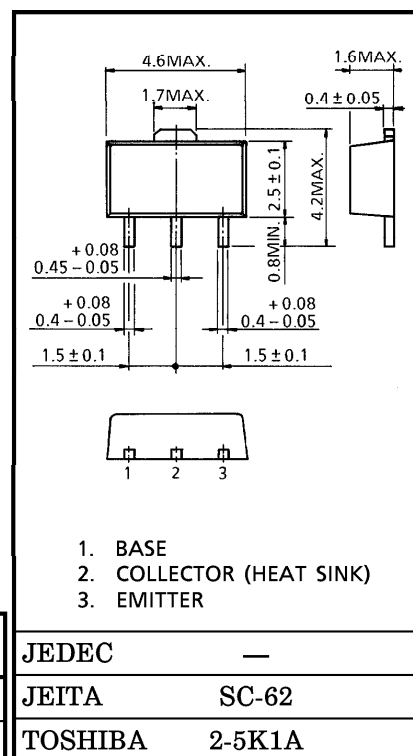
- High DC Current Gain and Excellent h_{FE} Linearity
 : $h_{FE}(1) = 140 \sim 600$ ($V_{CE} = 1V$, $I_C = 0.5A$)
 : $h_{FE}(2) = 70$ (Min.), 140 (Typ.) ($V_{CE} = 1V$, $I_C = 2A$)
- Low Saturation Voltage
 : $V_{CE(sat)} = 0.5V$ (Max.) ($I_C = 2A$, $I_B = 50mA$)
- Small Flat Package
- $P_C = 1 \sim 2W$ (Mounted on Ceramic Substrate)

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	V
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current	DC	I_C	2	A
	Pulse (Note 1)	I_{CP}	4	
Base Current	DC	I_B	0.4	A
	Pulse (Note 1)	I_{BP}	0.8	
Collector Power Dissipation		P_C	500	mW
Collector Power Dissipation		P_C (Note 2)	1000	mW
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	$-55 \sim 150$	$^\circ C$

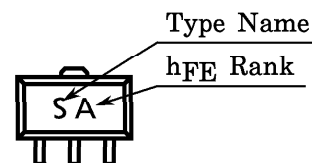
(Note 1) : Pulse Width $\leq 10ms$, Duty Cycle $\leq 30\%$ (Note 2) : 2SC2982 Mounted on Ceramic Substrate ($250mm^2 \times 0.8t$)

Unit in mm



Weight : 0.05g (Typ.)

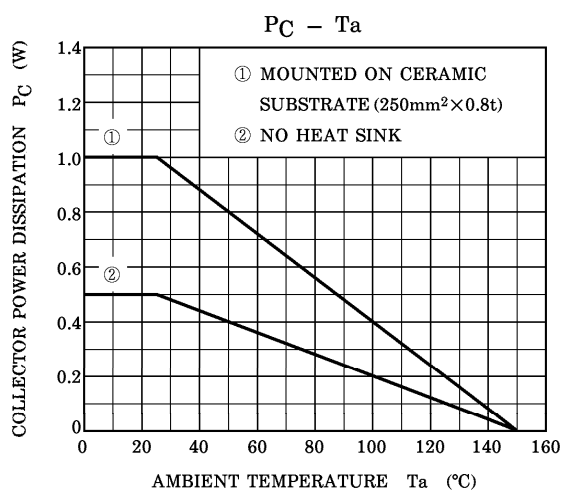
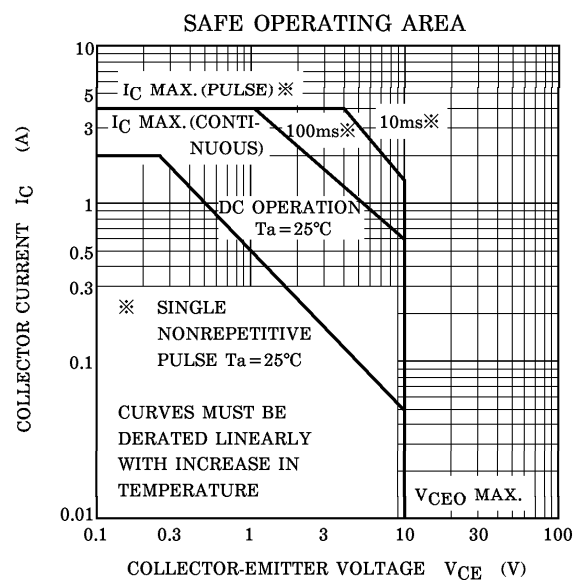
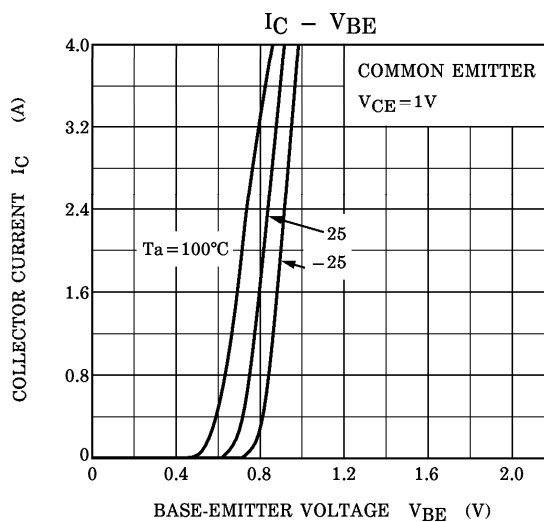
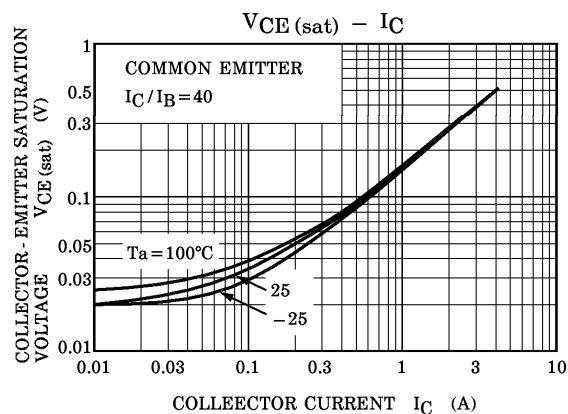
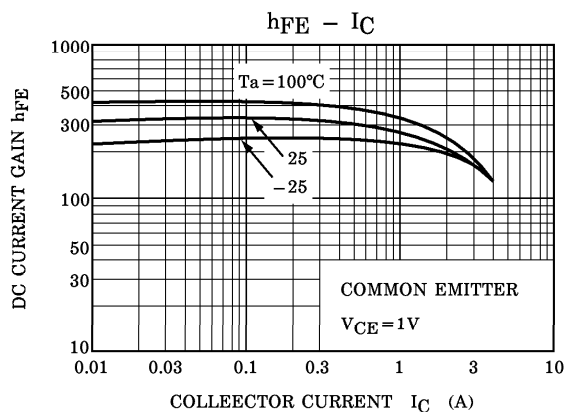
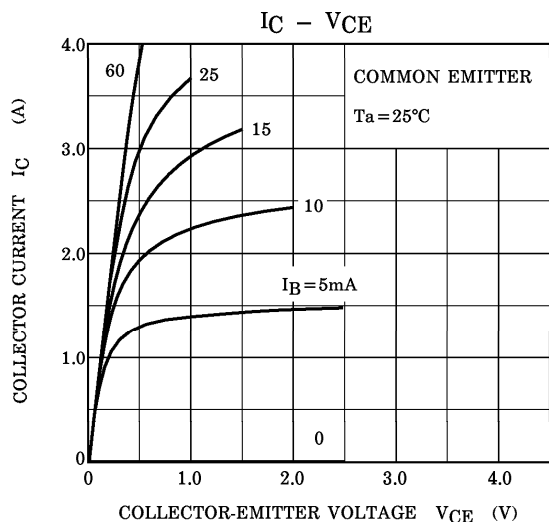
MARKING



ELECTRICAL CHARACTERISTICS (Ta = 25°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	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	10	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	6	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note 3)	$V_{CE}=1V, I_C=0.5A$	140	—	600	
	$h_{FE(2)}$	$V_{CE}=1V, I_C=2A$	70	140	—	
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 3) : $h_{FE(1)}$ Classification A : 140~240, B : 200~330, C : 300~450, D : 420~600



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