

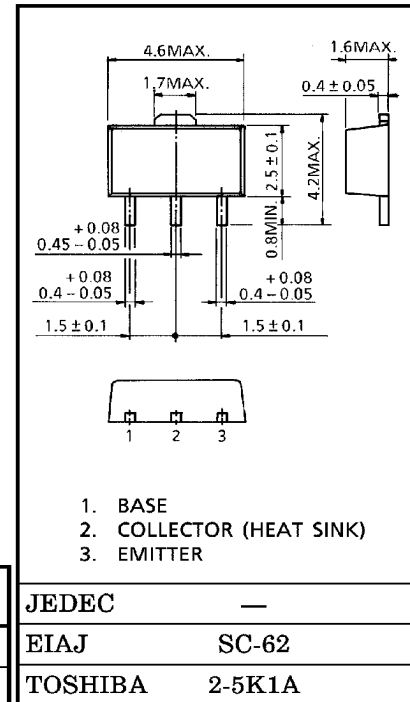
TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC2982

STOROBO FLASH APPLICATIONS
MEDIUM POWER AMPLIFIER APPLICATIONS

Unit in mm

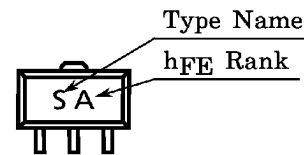
- High DC Current Gain and Excellent h_{FE} Linearity
 - : $h_{FE}(1) = 140 \sim 600$ ($V_{CE} = 1V, I_C = 0.5A$)
 - : $h_{FE}(2) = 70$ (Min.), 140 (Typ.) ($V_{CE} = 1V, I_C = 2A$)
- Low Saturation Voltage
 - : $V_{CE(sat)} = 0.5V$ (Max.) ($I_C = 2A, I_B = 50mA$)
- Small Flat Package
- $P_C = 1 \sim 2W$ (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
	Pulse (Note 1)	I_{CP}	4
Base Current	DC	I_B	0.4
	Pulse (Note 1)	I_{BP}	0.8
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation	P_C^*	1000	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

MARKING



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

P_C^* : 2SC2982 Mounted on Ceramic Substrate ($250mm^2 \times 0.8t$)

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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 2)	$V_{CE} = 1V, I_C = 0.5A$	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 2 : $h_{FE} (1)$ Classification A : 140~240, B : 200~330, C : 300~450, D : 420~600

