

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC4781

STOROBO FLASH APPLICATIONS

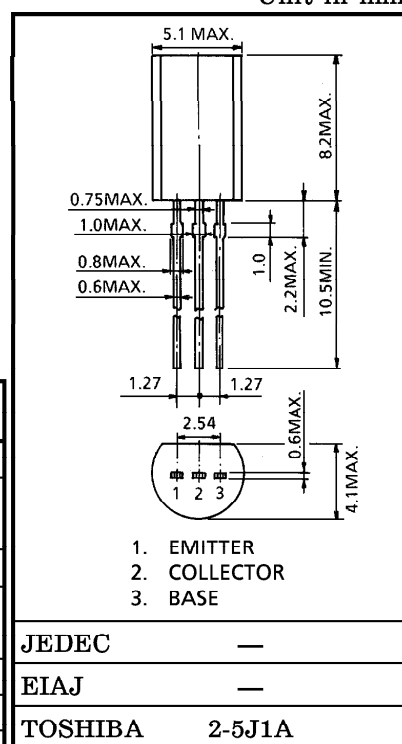
MEDIUM POWER AMPLIFIER APPLICATIONS

- High DC Current Gain and Excellent h_{FE} Linearity
 : $h_{FE}(1) = 200 \sim 600$ ($V_{CE} = 2V$, $I_C = 1A$)
 : $h_{FE}(2) = 300$ (Typ.) ($V_{CE} = 2V$, $I_C = 4A$)
- Low Saturation Voltage
 : $V_{CE(sat)} = 0.5V$ (Max.) ($I_C = 4A$, $I_B = 80mA$)

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	4	A
	Pulsed	I_{CP}	8	
Base Current		I_B	0.8	A
Collector Power Dissipation		P_C	900	mW
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	$-55 \sim 150$	$^\circ C$

Unit in mm

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	$V_{(BR) CEO}$	$I_C = 10mA$, $I_B = 0$	10	—	—	V
DC Current Gain	$h_{FE}(1)$	$V_{CE} = 2V$, $I_C = 1A$	200	—	600	
	$h_{FE}(2)$	$V_{CE} = 2V$, $I_C = 4A$	140	300	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4A$, $I_B = 80mA$	—	0.28	0.5	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = 2V$, $I_C = 4A$	—	1.0	1.5	V
Transition Frequency	f_T	$V_{CE} = 2V$, $I_C = 0.5A$	—	170	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V$, $I_E = 0$, $f = 1MHz$	—	50	—	pF

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