TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

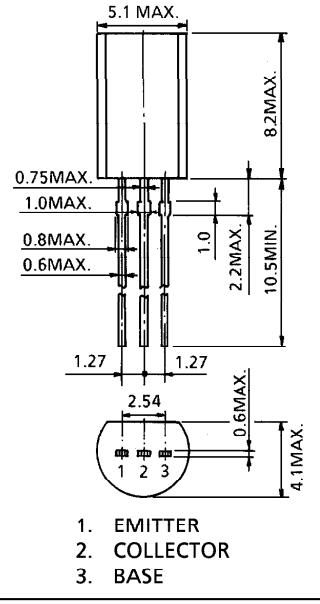
2SC4781

STOROBO FLASH APPLICATIONS

MEDIUM POWER AMPLIFIER APPLICATIONS

- High DC Current Gain and Excellent h_{FE} Linearity
  : $h_{FE\,(1)}$ = 200~600 (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)

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	2-5J1A

MAXIMUM RATINGS (Ta = 25°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	°C
Storage Temperature Range		T_{stg}	−55~150	°C

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
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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