

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SA1905

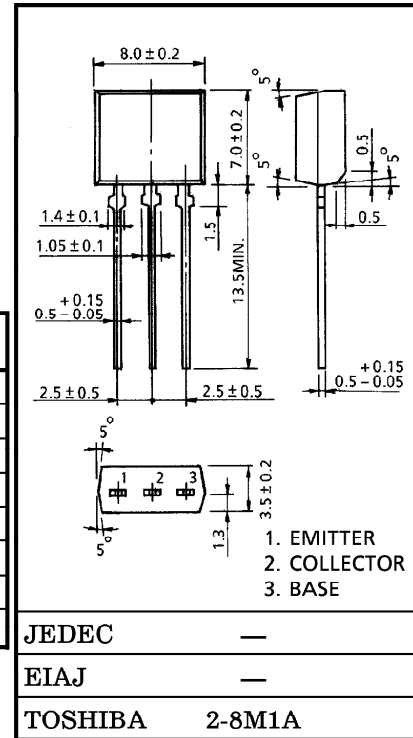
HIGH CURRENT SWITCHING APPLICATIONS

Unit in mm

- Low Collector Saturation Voltage
: $V_{CE(sat)} = -0.4V$ (Max.)
- High Speed Switching : $t_{stg} = 1.0\mu s$ (Typ.)
- Complementary to 2SC5076

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-5	A
Base Current	I_B	-1	A
Collector Power Dissipation	P_C	1.3	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



Weight : 0.55g (Typ.)

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current	I_{CBO}	$V_{CB} = -50V, I_E = 0$	—	—	-1	μA	
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5V, I_C = 0$	—	—	-1	μA	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-50	—	—	V	
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE} = -1V, I_C = -1A$	70	—	240	—	
	$h_{FE(2)}$	$V_{CE} = -1V, I_C = -3A$	30	—	—		
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C = -3A, I_B = -0.15A$	—	-0.2	-0.4	V
	Base-Emitter	$V_{BE(sat)}$	$I_C = -3A, I_B = -0.15A$	—	-0.9	-1.2	
Transition Frequency	f_T	$V_{CE} = -4V, I_C = -1A$	—	60	—	MHz	
Collector Output Capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	170	—	pF	
Switching Time	Turn-on Time	t_{on}			—	0.1	—
	Storage Time	t_{stg}			—	1.0	μs
	Fall Time	t_f			—	0.1	—

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