# 2SC5905

### Silicon NPN triple diffusion mesa type

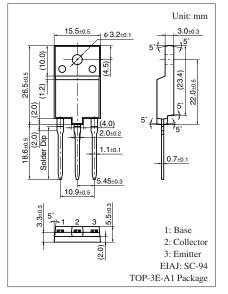
Horizontal deflection output for TV, CRT monitor

#### Features

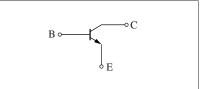
- High breakdown voltage:  $V_{CBO} \ge 1700 \text{ V}$
- High-speed switching:  $t_f < 200$  ns
- Wide safe operation area

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	1 700	V
Collector-emitter voltage (E-B short)	V <sub>CES</sub>	1 700	V
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	600	V
Emitter-base voltage (Collector open)	V <sub>EBO</sub>	7	V
Base current	IB	8	А
Collector current	I <sub>C</sub>	20	А
Peak collector current *	I <sub>CP</sub>	30	А
Collector power dissipation	P <sub>C</sub>	70	W
$T_a = 25^{\circ}C$		3.5	
Junction temperature	Tj	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

#### Absolute Maximum Ratings $T_C = 25^{\circ}C$



#### Internal Connection

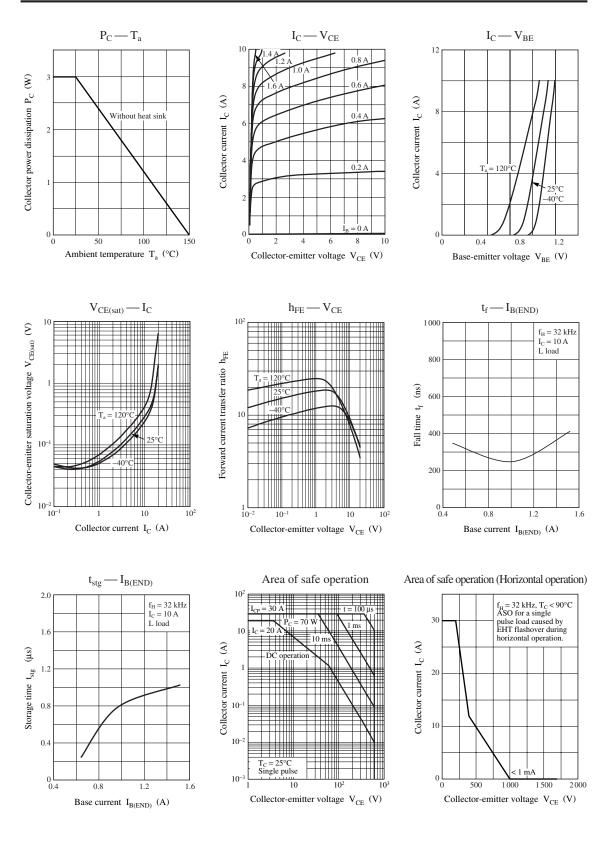


Note) \*: Non-repetitive peak collector current

#### Electrical Characteristics $T_C = 25^{\circ}C \pm 3^{\circ}C$

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base cutoff current (Emitter open)	I <sub>CBO</sub>	$V_{CB} = 1000 \text{ V}, I_E = 0$			50	μΑ
		$V_{CB} = 1700 \text{ V}, I_E = 0$			1	mA
Emitter-base cutoff current (Collector open)	I <sub>EBO</sub>	$V_{EB} = 7 V, I_C = 0$			50	μA
Forward current transfer ratio	h <sub>FE</sub>	$V_{CE} = 5 V, I_C = 10 A$	5		12	—
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_{C} = 10 \text{ A}, I_{B} = 2.5 \text{ A}$			3	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	$I_{C} = 10 \text{ A}, I_{B} = 2.5 \text{ A}$			1.5	V
Transition frequency	f <sub>T</sub>	$V_{CE} = 10 \text{ V}, I_C = 0.1 \text{ A}, f = 0.5 \text{ MHz}$		3		MHz
Storage time	t <sub>stg</sub>	$I_C = 10 A$ , Resistance loaded			3.0	μs
Fall time	t <sub>f</sub>	$I_{B1} = 2.5 \text{ A}, I_{B2} = -5.0 \text{ A}$			0.2	μs

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.



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