

# 2SD2358

## Silicon NPN epitaxial planar type

For low-frequency output amplification

Complementary to 2SB1538

### ■ Features

- Low collector-emitter saturation voltage  $V_{CE(sat)}$ :  $< 0.15$  V
- Allowing supply with the radial taping

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

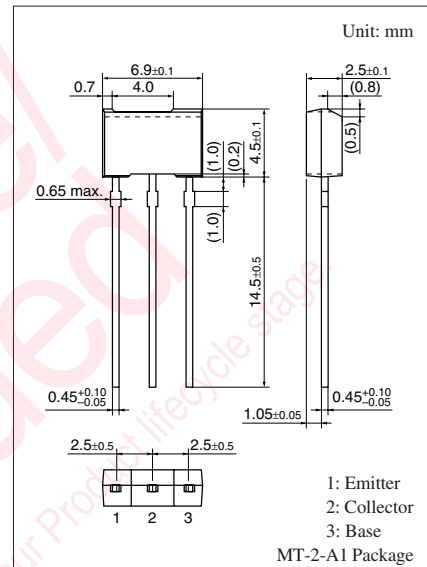
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	10	V
Collector-emitter voltage (Base open)	$V_{CEO}$	10	V
Emitter-base voltage (Collector open)	$V_{EBO}$	5	V
Collector current	$I_C$	1	A
Peak collector current	$I_{CP}$	1.2	A
Collector power dissipation *	$P_C$	1	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

Note) \*: Printed circuit board: Copper foil area of  $1\text{ cm}^2$  or more, and the board thickness of 1.7 mm for the collector portion

### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	$I_C = 10\ \mu\text{A}$ , $I_E = 0$	10			V
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = 1\ \text{mA}$ , $I_B = 0$	10			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10\ \mu\text{A}$ , $I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 7\ \text{V}$ , $I_E = 0$			1	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 2\ \text{V}$ , $I_C = 100\ \text{mA}$	200		800	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\ \text{mA}$ , $I_B = 20\ \text{mA}$			0.15	V
Transition frequency	$f_T$	$V_{CB} = 5\ \text{V}$ , $I_E = -50\ \text{mA}$ , $f = 200\ \text{MHz}$		120		MHz
Collector output capacitance (Common base, input open circuited)	$C_{ob}$	$V_{CB} = 20\ \text{V}$ , $I_E = 0$ , $f = 1\ \text{MHz}$		30		pF

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



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