

# 2SD2358

## Silicon NPN epitaxial planer type

For low-frequency output amplification  
Complementary to 2SB1538

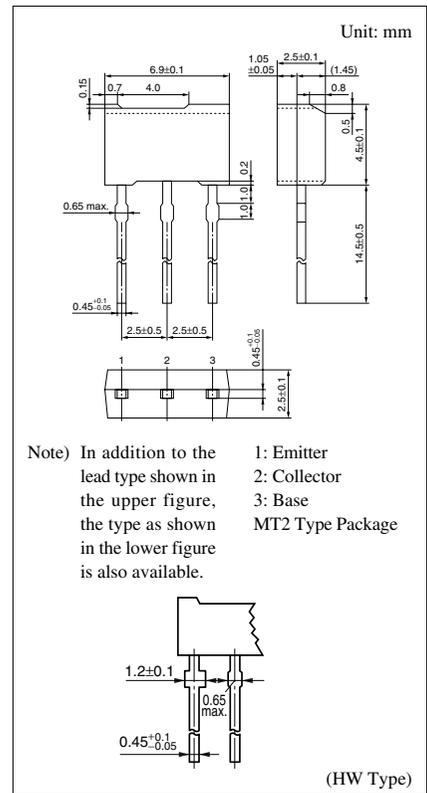
### ■ Features

- Low collector to 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 to base voltage	$V_{CBO}$	10	V
Collector to emitter voltage	$V_{CEO}$	10	V
Emitter to base voltage	$V_{EBO}$	5	V
Peak collector current	$I_{CP}$	1.2	A
Collector current	$I_C$	1	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 cm<sup>2</sup> 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 cutoff current	$I_{CBO}$	$V_{CB} = 7\text{ V}, I_E = 0$			1	$\mu\text{A}$
Collector to base voltage	$V_{CBO}$	$I_C = 10\ \mu\text{A}, I_E = 0$	10			V
Collector to emitter voltage	$V_{CEO}$	$I_C = 1\ \text{mA}, I_B = 0$	10			V
Emitter to base voltage	$V_{EBO}$	$I_E = 10\ \mu\text{A}, I_C = 0$	5			V
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 2\ \text{V}, I_C = 100\ \text{mA}$	200		800	
Collector to 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	$C_{ob}$	$V_{CB} = 20\ \text{V}, I_E = 0, f = 1\ \text{MHz}$		30		pF