

# Medium Power Transistor (−60V, −2A)

2SB1561 [查询"2SB1561T100Q"供应商](#)

## ●Features

- 1) Low saturation voltage, typically  $V_{CE(sat)} = -0.15V$  at  $I_C / I_B = -1A / -50mA$ .
- 2) Collector-emitter voltage =  $-60V$
- 3)  $P_C = 2W$   
(on  $40 \times 40 \times 0.7$  mm ceramic board).
- 4) Complements the 2SD2391.

## ●Packaging specifications and $h_{FE}$

Type	2SB1561
Package	MPT3
$h_{FE}$	Q
Marking	BL*
Code	T100
Basic ordering unit (pieces)	1000

\* Denotes  $h_{FE}$

## ●Absolute maximum ratings ( $T_a=25^\circ C$ )

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	−60	V
Collector-emitter voltage	$V_{CEO}$	−60	V
Emitter-base voltage	$V_{EBO}$	−6	V
Collector current	$I_C$	−2	A
	$I_{CP}$	−5	A *1
Collector power dissipation	$P_C$	0.5	W
		2	
Junction temperature	$T_J$	150	$^\circ C$
Storage temperature	$T_{stg}$	−55~+150	$^\circ C$

\*1 Single pulse,  $P_w=10ms$  \*2 When mounted on a  $40 \times 40 \times 0.7$  mm ceramic board.

## ●Electrical characteristics ( $T_a=25^\circ C$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	−60	—	—	V	$I_C = -50 \mu A$
Collector-emitter breakdown voltage	$BV_{CEO}$	−60	—	—	V	$I_C = -1mA$
Emitter-base breakdown voltage	$BV_{EBO}$	−6	—	—	V	$I_E = -50 \mu A$
Collector cutoff current	$I_{CBO}$	—	−0.1	—	$\mu A$	$V_{CB} = -50V$
Emitter cutoff current	$I_{EBO}$	—	—	−0.1	$\mu A$	$V_{EB} = -5V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	−0.15	−0.35	V	$I_C/I_B = -1A/-50mA$ *
DC current transfer ratio	$h_{FE}$	120	—	270	—	$V_{CE}/I_C = -2V/-0.5A$
Transition frequency	$f_T$	—	200	—	MHz	$V_{CE} = -2V, I_E = 0.5A, f = 100MHz$ *
Output capacitance	$C_{ob}$	—	23	—	pF	$V_{CB} = -10V, I_E = 0A, f = 1MHz$

\* Measured using pulse current

(94S-191-B228)

# Medium Power Transistor (60V, 2A)

2SD2391

## ●Features

- 1) Low saturation voltage, typically  $V_{CE(sat)} = 0.13V$  at  $I_C / I_B = 1A / 50mA$ .
- 2) Collector-emitter voltage =  $60V$
- 3)  $P_C = 2W$   
(on  $40 \times 40 \times 0.7$  mm ceramic board).
- 4) Complements the 2SB1561.

## ●Packaging specifications and $h_{FE}$

Type	2SD2391
Package	MPT3
$h_{FE}$	Q
Marking	DT*
Code	T100
Basic ordering unit (pieces)	1000

\* Denotes  $h_{FE}$

## ●Absolute maximum ratings ( $T_a=25^\circ C$ )

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	60	V
Collector-emitter voltage	$V_{CEO}$	60	V
Emitter-base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	2	A
		6	A *1
Collector power dissipation	$P_C$	0.5	W
		2	
Junction temperature	$T_J$	150	$^\circ C$
Storage temperature	$T_{stg}$	−55~+150	$^\circ C$

\*1 Single pulse,  $P_w=10ms$  \*2 When mounted on a  $40 \times 40 \times 0.7$  mm ceramic board.

## ●Electrical characteristics ( $T_a=25^\circ C$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	60	—	—	V	$I_C = 50 \mu A$
Collector-emitter breakdown voltage	$BV_{CEO}$	60	—	—	V	$I_C = 1mA$
Emitter-base breakdown voltage	$BV_{EBO}$	6	—	—	V	$I_E = 50 \mu A$
Collector cutoff current	$I_{CBO}$	—	—	0.1	$\mu A$	$V_{CB} = 60V$
Emitter cutoff current	$I_{EBO}$	—	—	0.1	$\mu A$	$V_{EB} = 5V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.13	0.35	V	$I_C/I_B = 1A/50mA$ *
DC current transfer ratio	$h_{FE}$	120	—	270	—	$V_{CE}/I_C = 2V/0.5A$
Transition frequency	$f_T$	—	210	—	MHz	$V_{CE} = 2V, I_E = -0.5A, f = 100MHz$ *
Output capacitance	$C_{ob}$	—	21	—	pF	$V_{CB} = 10V, I_E = 0A, f = 1MHz$

\* Measured using pulse current

(94S-380-D228)