

Power Transistor (−50V, −2A)

2SA1797 / 2SB1443

●Features

- 1) Low saturation voltage, $V_{CE(sat)} = -0.35V$ (Max.) at $I_C / I_E = -1A / -50mA$.
- 2) Excellent DC current gain characteristics.
- 3) Complements the 2SA1797 and 2SC4672.

●Packaging specifications and hFE

Type	2SA1797	2SB1443
Package	MPT3	ATV
hFE	PQ	Q
Marking	AG*	—
Code	T100	TV2
Basic ordering unit (pieces)	1000	2500

* Denotes hFE

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	−50	—	—	V	$I_C = -50 \mu A$
Collector-emitter breakdown voltage	BV_{CEO}	−50	—	—	V	$I_C = -1mA$
Emitter-base breakdown voltage	BV_{EBO}	−6	—	—	V	$I_E = -50 \mu A$
Collector cutoff current	I_{CBO}	—	—	−0.1	μA	$V_{CB} = -50V$
Emitter cutoff current	I_{EBO}	—	—	−0.1	μA	$V_{EB} = -5V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	−0.15	−0.35	V	$I_C / I_E = -1A / -50mA$ *
DC current transfer ratio	2SA1797	hFE	82	270	—	$V_{CE} / I_C = -2V / -0.5A$
	2SB1443	hFE	120	270	—	
Transition frequency	f_T	—	200	—	MHz	$V_{CE} = -2V$, $I_E = 0.5A$, $f = 100MHz$ *
Output capacitance	C_{ob}	—	36	—	pF	$V_{CB} = -10V$, $I_E = 0A$, $f = 1MHz$

* Measured using pulse current.

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	−50	V
Collector-emitter voltage	V_{CEO}	−50	V
Emitter-base voltage	V_{EBO}	−6	V
Collector current	I_C	−2	A (DC)
		−5	A (Pulse) *1
Collector power dissipation	2SA1797 2SB1443	P_C	0.5
			2
			1
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	−55~+150	°C

*1 Single pulse, $P_W = 10ms$

*2 When mounted on a 40×40×0.7mm ceramic board.

*3 Printed circuit board 1.7mm thick, collector plating 1cm² or larger.

(96-100-B208)

Low Frequency Transistor (50V, 2A)

2SC4672

●Features

- 1) Low saturation voltage, typically $V_{CE(sat)} = 0.1V$ at $I_C / I_E = 1A / 50mA$.
- 2) Excellent DC current gain characteristics.
- 3) Complements the 2SA1797.

●Packaging specifications and hFE

Type	2SC4672
Package	MPT3
hFE	PQ
Marking	DK*
Code	T100
Basic ordering unit (pieces)	1000

* Denotes hFE

●Electrical characteristics (Ta=25°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}	50	—	—	V	$I_C = 1mA$
Emitter-base breakdown voltage	BV_{EBO}	6	—	—	V	$I_E = 50 \mu A$
Collector cutoff current	I_{CBO}	—	—	0.1	μA	$V_{CB} = 60V$
Emitter cutoff current	I_{EBO}	—	—	0.1	μA	$V_{EB} = 5V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.1	0.35	V	$I_C / I_E = 1A / 50mA$ *
DC current transfer ratio	hFE	82	—	270	—	$V_{CE} = 2V$, $I_C = 0.5A$ *
Transition frequency	f_T	—	210	—	MHz	$V_{CE} = 2V$, $I_E = -0.5A$, $f = 100MHz$
Output capacitance	C_{ob}	—	25	—	pF	$V_{CB} = 10V$, $I_E = 0A$, $f = 1MHz$

* Measured using pulse current.

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	2	A (DC)
		5	A (Pulse) *
Collector power dissipation	P_C	0.5	W
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	−55~+150	°C

* Single pulse, $P_W = 10ms$

(96-181-D208)