

High-voltage Amplifier Transistor (−120V, −50mA)

2SA1579 / 2SA1514K

● Features

- 1) High breakdown voltage, ($BV_{CEO} = -120V$)
- 2) Complements the 2SC4102 / 2SC3906K.

● Packaging specifications and hfe

Type	2SA1579	2SA1514K
Package	UMT3	SMT3
hfe	RS	RS
Marking	R*	R*
Code	T106	T146
Basic ordering unit (pieces)	3000	3000

* Denotes hfe

● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	−120	V
Collector-emitter voltage	V_{CEO}	−120	V
Emitter-base voltage	V_{EBO}	−5	V
Collector current	I_C	−50	mA
Collector power dissipation	P_C	0.2	W
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	−55~+150	°C

● Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	−120	—	—	V	$I_C = -50 \mu A$
Collector-emitter breakdown voltage	BV_{CEO}	−120	—	—	V	$I_C = -1 mA$
Emitter-base breakdown voltage	BV_{EBO}	−5	—	—	V	$I_E = -50 \mu A$
Collector cutoff current	I_{CBO}	—	—	−0.5	μA	$V_{CB} = -100V$
Emitter cutoff current	I_{EBO}	—	—	−0.5	μA	$V_{EB} = -4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	−0.5	V	$I_C/I_E = -10mA/-1mA$
DC current transfer ratio	hFE	180	—	560	—	$V_{CE} = -6V, I_C = -2mA$
Transition frequency	f_T	—	140	—	MHz	$V_{CE} = -12V, I_E = 2mA, f = 30MHz$
Output capacitance	C_{ob}	—	3.2	—	pF	$V_{CB} = -12V, I_E = 0A, f = 1MHz$

(96-92-A41)

High-voltage Amplifier Transistor (120V, 50mA)

2SC4102 / 2SC3906K

● Features

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● Packaging specifications and hfe

Type	2SC4102	2SC3906K
Package	UMT3	SMT3
hfe	RS	RS
Marking	T*	T*
Code	T106	T146
Basic ordering unit (pieces)	3000	3000

* Denotes hfe

● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	120	V
Collector-emitter voltage	V_{CEO}	120	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	0.2	W
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	−55~+150	°C

● Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	120	—	—	V	$I_C = 50 \mu A$
Collector-emitter breakdown voltage	BV_{CEO}	120	—	—	V	$I_C = 1 mA$
Emitter-base breakdown voltage	BV_{EBO}	5	—	—	V	$I_E = 50 \mu A$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB} = 100V$
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	$V_{EB} = 4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.5	V	$I_C/I_E = 10mA/1mA$
DC current transfer ratio	hFE	180	—	560	—	$V_{CE} = 6V, I_C = 2mA$
Transition frequency	f_T	—	140	—	MHz	$V_{CE} = 12V, I_E = -2mA, f = 100MHz$
Output capacitance	C_{ob}	—	2.5	—	pF	$V_{CB} = 12V, I_E = 0A, f = 1MHz$

(96-170-C41)