

# 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	$\mu A$	$V_{CB} = -100V$
Emitter cutoff current	$I_{EBO}$	—	—	−0.5	$\mu A$	$V_{EB} = -4V$
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

- 1) High breakdown voltage, ( $BV_{CEO} = 120V$ )
- 2) Complements the 2SA1579 / 2SA1514K.

### ● 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	$\mu A$	$V_{CB} = 100V$
Emitter cutoff current	$I_{EBO}$	—	—	0.5	$\mu A$	$V_{EB} = 4V$
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)