



**THE DATASHEET OF  
2SA1514KT146R**



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

## 2SA1579 / 2SA1514K / 2SA1038S

●Features

- 1) High breakdown voltage. ( $BV_{CEO} = -120V$ )
- 2) Complements the 2SC4102 / 2SC3906K / 2SC2389S.

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

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	Pc	0.2	W
		0.3	
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55~+150	°C

●Packaging specifications and  $h_{FE}$

Type	2SA1579	2SA1514K	2SA1038S
Package	UMT3	SMT3	SPT
$h_{FE}$	RS	RS	RS
Marking	R*	R*	-
Code	T106	T146	TP
Basic ordering unit (pieces)	3000	3000	5000

\*Denotes htc

●External dimensions (Units : mm)

2SA1579

ROHM : UMT3 (1) Emitter  
EIAJ : SC-70 (2) Base  
JEDEC : SOT-323 (3) Collector

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2SA1514K

ROHM : SMT3 (1) Emitter  
EIAJ : SC-59 (2) Base  
JEDEC : SOT-346 (3) Collector

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2SA1038S


ROHM : SPT (1) Emitter  
EIAJ : SC-72 (2) Collector  
(3) Base

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

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	$I_c = -1mA$
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	$h_{FE}$	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	$V_{CB} = -12V, I_e = 0A, f = 1MHz$

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