

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

2SA1579 / 2SA1514K

●Features

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

●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	$P_c$	0.2	W
Junction temperature	$T_j$	150	$^{\circ}C$
Storage temperature	$T_{stg}$	–55 to +150	$^{\circ}C$

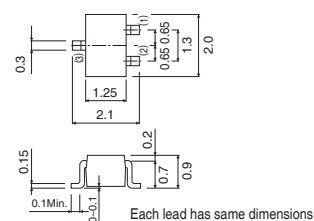
●Packaging specifications and  $h_{FE}$

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

\*Denotes  $h_{FE}$

●Dimensions (Units : mm)

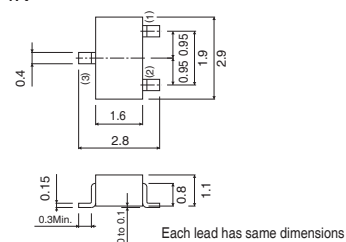
2SA1579



ROHM : UMT3  
EIAJ : SC-70  
JEDEC : SOT-323

(1) Emitter  
(2) Base  
(3) Collector

2SA1514K



ROHM : SMT3  
EIAJ : SC-59  
JEDEC : SOT-346

(1) Emitter  
(2) Base  
(3) Collector

●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	$I_c/I_B = -10mA/-1mA$
DC current transfer ratio	$h_{FE}$	180	–	560	–	$V_{CE} = -6V, I_c = -2mA$
Transition frequency	$f_T$	–	140	–	MHz	$V_{CE} = -12V, I_E = 2mA, f = 100MHz$
Output capacitance	$C_{ob}$	–	3.2	–	pF	$V_{CB} = -12V, I_E = 0A, f = 1MHz$

●Electrical characteristics curves

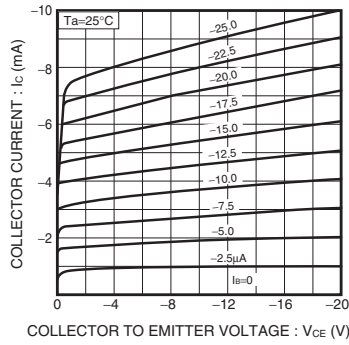


Fig.1 Ground emitter output characteristics

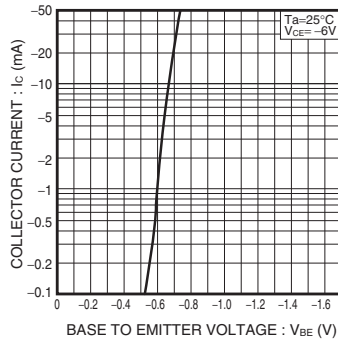


Fig.2 Ground emitter propagation characteristics

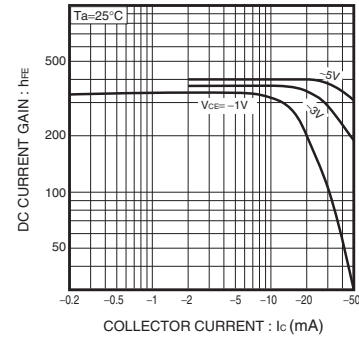


Fig.3 DC current gain vs. collector current

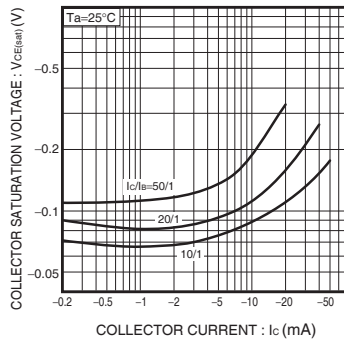


Fig.4 Collector-Emitter saturation voltage vs. collector current

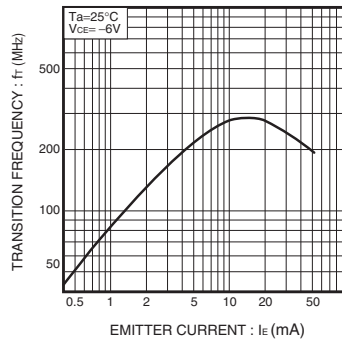


Fig.5 Transition frequency vs. emitter current

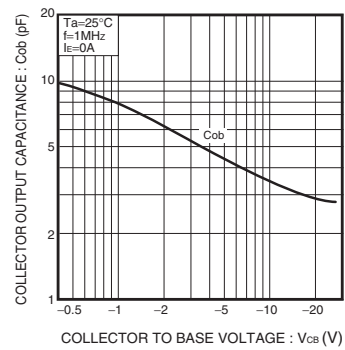


Fig.6 Collector output capacitance vs. collector-base voltage

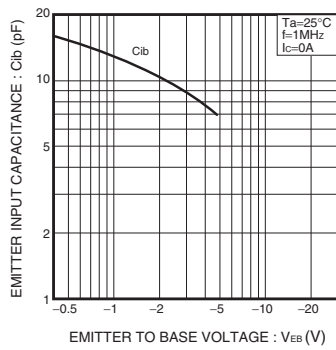


Fig.7 Emitter input capacitance vs. emitter-base voltage

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