

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

2SA1579 / 2SA1514K

●Features

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

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

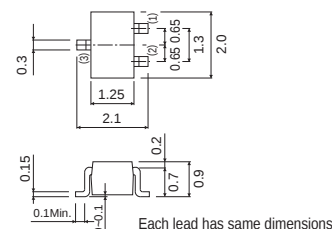
Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	–120	V
Collector-emitter voltage	V_{CEO}	–120	V
Emitter-base voltage	V_{EBO}	–5	V
Collector current	I_C	–50	mA
Collector power dissipation	P_C	0.2	W
Junction temperature	T_J	150	$^{\circ}C$
Storage temperature	T_{stg}	–55 to +150	$^{\circ}C$

●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

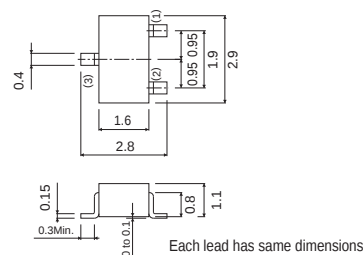
*Denotes h_{FE}

●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	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	$I_C/I_B = -10mA/-1mA$
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

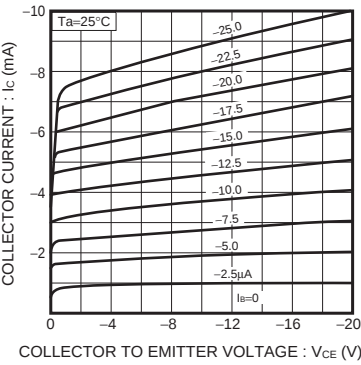


Fig.1 Ground emitter output characteristics

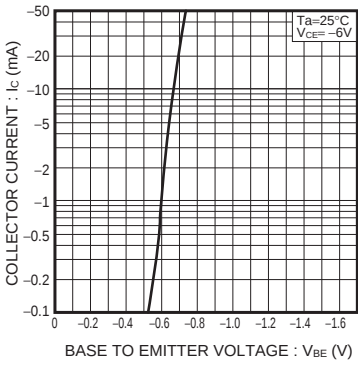


Fig.2 Ground emitter propagation characteristics

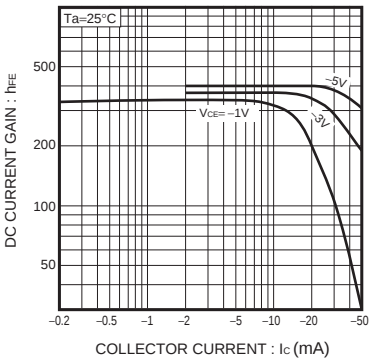


Fig.3 DC current gain vs. collector current

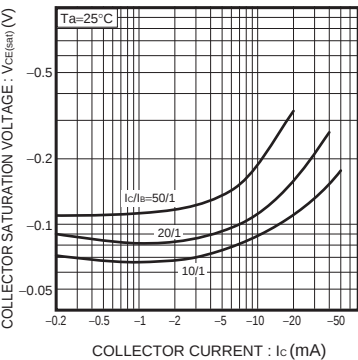


Fig.4 Collector-Emitter saturation voltage vs. collector current

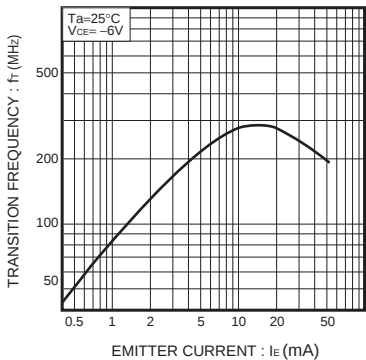


Fig.5 Transition frequency vs. emitter current

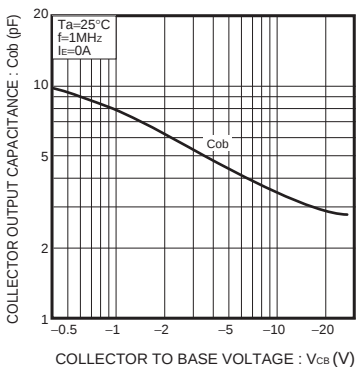


Fig.6 Collector output capacitance vs. collector-base voltage

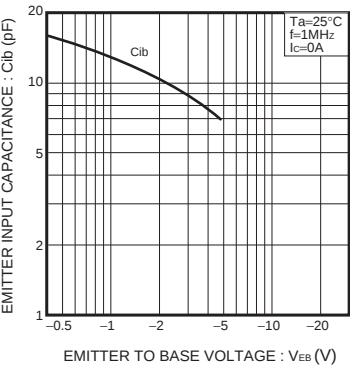


Fig.7 Emitter input capacitance vs. emitter-base voltage

Notes

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