

High-voltage Amplifier Transistor

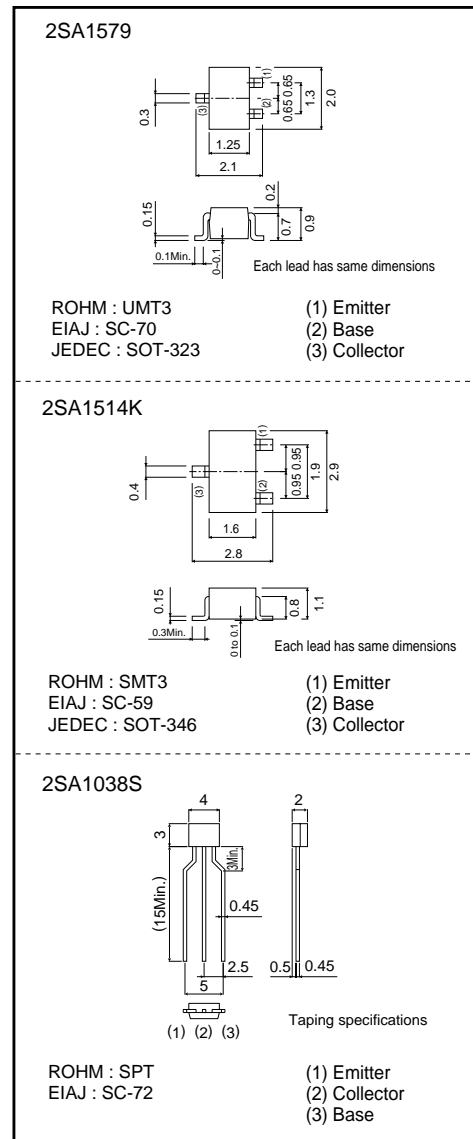
(-120V, -50mA)

2SA1579 / 2SA1514K / 2SA1038S

●Features

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

●External dimensions (Unit : mm)



Transistors

● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	-120	V
Collector-emitter voltage	V _{CE0}	-120	V
Emitter-base voltage	V _{EB0}	-5	V
Collector current	I _c	-50	mA
Collector power dissipation	2SA1579 / 2SA1514K	0.2	W
	2SA1038S	0.3	
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +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 h_{FE}

● Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	-120	-	-	V	I _c = -50μA
Collector-emitter breakdown voltage	BV _{CE0}	-120	-	-	V	I _c = -1mA
Emitter-base breakdown voltage	BV _{EB0}	-5	-	-	V	I _E = -50μA
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

Transistors

●Electrical characteristic curves

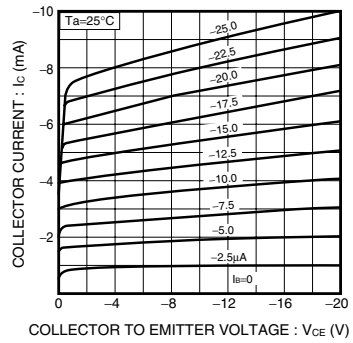


Fig.1 Ground emitter output characteristics

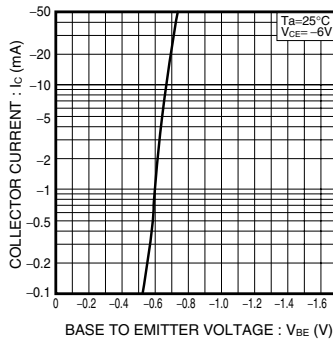


Fig.2 Ground emitter propagation characteristics

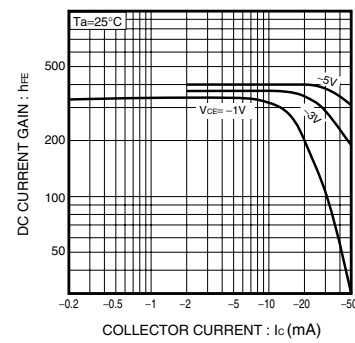


Fig.3 DC current gain vs. collector current

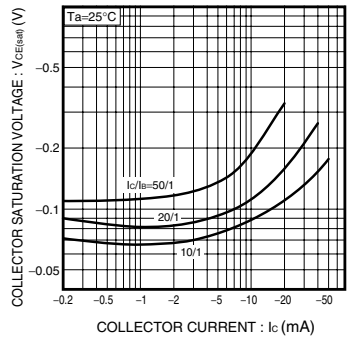


Fig.4 Collector-Emitter saturation voltage vs. collector current

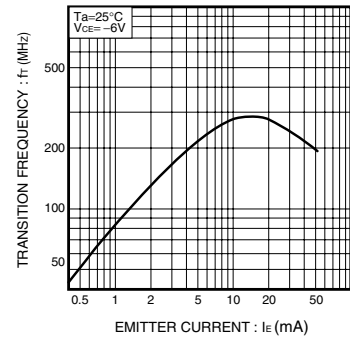


Fig.5 Transition frequency vs. emitter current

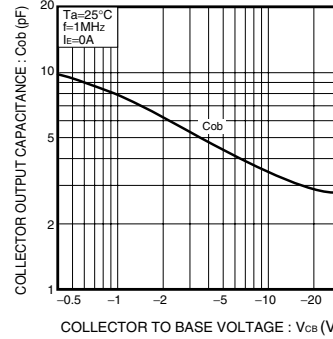


Fig.6 Collector output capacitance vs. collector-base voltage

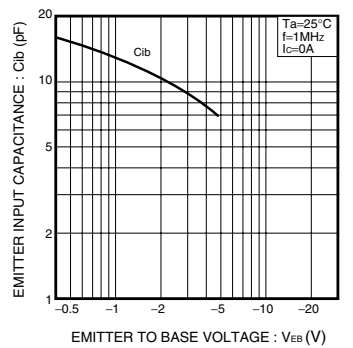


Fig.7 Emitter input capacitance vs. emitter-base voltage

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