

For audio amplifier output stages / TV velocity modulation (−160V, −1.5A)

2SA1964

●Features

- 1) Flat DC current gain characteristics.
- 2) High breakdown voltage. ($BV_{CEO} = -160V$)
- 3) High transition frequency, typically $f_T = 150MHz$
- 4) Wide SOA (safe operating area).
- 5) Complements the 2SC5248.

●Packaging specifications and h_{FE}

Type	2SA1964
Package	TO-220FP
h _{FE}	DE
Code	—
Basic ordering unit (pieces)	500

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	−160	V
Collector-emitter voltage	V _{CE0}	−160	V
Emitter-base voltage	V _{EB0}	−5	V
Collector current	I _c	−1.5	A
Collector power dissipation	P _c	2	W
		20	W (T _c = 25°C)
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-emitter breakdown voltage	BV _{CEO}	−160	—	—	V	I _c = −1mA
Collector-base breakdown voltage	BV _{CB0}	−160	—	—	V	I _c = −50 μA
Emitter-base breakdown voltage	BV _{EB0}	−5	—	—	V	I _e = −50 μA
Collector cutoff current	I _{cBO}	—	—	−1	μA	V _{CB} = −160V
Emitter cutoff current	I _{eBO}	—	—	−1	μA	V _{EB} = −4V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	−1	V	I _c /I _e = −1A/−0.1A
DC current transfer ratio	h _{FE}	60	—	200	—	V _{CE} = −5V, I _c = −0.1A
Transition frequency	f _T	—	150	—	MHz	V _{CE} = −10V, I _e = −0.2A, f = 100MHz
Output capacitance	C _{ob}	—	35	—	pF	V _{CB} = −10V, I _e = 0A, f = 1MHz

(SPEC-A315)

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2SC5248

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- 3) High transition frequency, typically $f_T = 150MHz$
- 4) Wide SOA (safe operating area).
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●Packaging specifications and h_{FE}

Type	2SC5248
Package	TO-220FP
h _{FE}	DE
Code	—
Basic ordering unit (pieces)	500

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	160	V
Collector-emitter voltage	V _{CE0}	160	V
Emitter-base voltage	V _{EB0}	5	V
Collector current	I _c	1.5	A
Collector power dissipation	P _c	2	W
		20	W (T _c = 25°C)
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-emitter breakdown voltage	BV _{CEO}	160	—	—	V	I _c = 1mA
Collector-base breakdown voltage	BV _{CB0}	160	—	—	V	I _c = 50 μA
Emitter-base breakdown voltage	BV _{EB0}	5	—	—	V	I _e = 50 μA
Collector cutoff current	I _{cBO}	—	—	1	μA	V _{CB} = 160V
Emitter cutoff current	I _{eBO}	—	—	1	μA	V _{EB} = 4V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	1	V	I _c /I _e = 1A/0.1A
DC current transfer ratio	h _{FE}	60	—	200	—	V _{CE} = 5V, I _c = 0.1A
Transition frequency	f _T	—	150	—	MHz	V _{CE} = 10V, I _e = 0.2A, f = 100MHz
Output capacitance	C _{ob}	—	20	—	pF	V _{CB} = 10V, I _e = 0A, f = 1MHz

(SPEC-C315)