

High-voltage Switching (Audio output amplifier transistor, Stabilized power supply transistor)

2SA1964

● Features

- 1) Flat DC current gain characteristics.
- 2) High breakdown voltage. ($BV_{CEO} = -160V$)
- 3) High f_t . (Typ. 150MHz)
- 4) Wide SOA (safe operating area).
- 5) Complements the 2SC5246.

● Packaging specifications and hve

Type	2SA1964
Package	TO-220FP
hve	DE
Code	—
Basic ordering unit (pieces)	500

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

Parameter	Symbol	Units	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
Junction temperature	T_J	20	$W(T_a = 25^\circ C)$
Storage temperature	T_{stg}	-55 ~ 150	$^\circ C$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CEO}	-160	—	—	V	$I_C = -1mA$
Collector-base breakdown voltage	BV_{CBO}	-160	—	—	V	$I_C = -50 \mu A$
Emitter-base breakdown voltage	BV_{EBO}	-5	—	—	V	$I_E = -50 \mu A$
Collector cutoff current	I_{CO}	—	—	-1	μA	$V_{CE} = -160V$
Emitter cutoff current	I_{EO}	—	—	-1	μA	$V_{BE} = -4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	-1	V	$I_C/I_E = -1A, I_B = -0.1A$
DC current transfer ratio	h_{FE}	60	—	200	—	$V_{CE} = -5V, I_C = -0.2A, f = 100MHz$
Transition frequency	f_t	—	150	—	MHz	$V_{CE} = -10V, I_C = -0.2A, f = 100MHz$
Output capacitance	C_{ob}	—	35	—	pf	$V_{CE} = -10V, I_C = 0A, f = 1MHz$