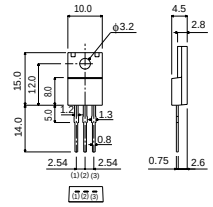
High-voltage Switching (Audio output amplifier transistor, TV velocity modulation transistor) (–160V, –1.5A)

2SA2005

●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 2SC5511.

●External dimensions (Units : mm)



(1) Base(Gate)
(2) Collector(Drain)
(3) Emitter(Source)

ROHM : TO-220FN

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	–160	V
Collector-emitter voltage	V_{CEO}	–160	V
Emitter-base voltage	V_{EBO}	–5	V
Collector current	I_C	–1.5	A
Collector power dissipation	P_C	2	W
		20	W (Tc = 25°C)
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55~+150	°C

●Packaging specifications and h_{FE}

Type	2SA2005
Package	TO-220FN
h_{FE}	DE
Code	-
Basic ordering unit	500

●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_{CBO}	–160	–	–	V	I_C = –50μA
Emitter-base breakdown voltage	BV_{EBO}	–5	–	–	V	I_E = –50μA
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_B = –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	Cob	–	35	–	pF	V_{CB} = –10V , I_E = 0A , f = 1MHz