

2SA2005

- 1) Flat DC current gain characteristics.
- 2) High breakdown voltage. ($V_{CE0} = -160V$)
- 3) High fr. (Typ. 150MHz)
- 4) Wide SOA (safe operating area).
- 5) Complements the 2SC5511.

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 ($T_C = 25^\circ\text{C}$)
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55~+150	$^\circ\text{C}$

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

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

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