

Power Transistor (–80V, –4A)

2SA2017

●Features

- 1) Low $V_{CE(sat)}$. (Typ. –0.3V at $I_C/I_B = -2/-0.2A$)
- 2) Excellent DC current gain characteristics.
- 3) $P_C = 30W$ ($T_C = 25^\circ C$)
- 4) Wide SOA (safe operating area).
- 5) Complements the 2SC5574.

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

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	–80	V
Collector-emitter voltage	V_{CEO}	–80	V
Emitter-base voltage	V_{EBO}	–5	V
Collector current	I_C	–4	A
		–6	A(Pulse)
Collector power dissipation	P_C	30	W($T_C = 25^\circ C$)
Junction temperature	T_J	150	$^\circ C$
Storage temperature	T_{stg}	–55~+150	$^\circ C$

●Packaging specifications and h_{FE}

Type	2SA2017
Package	TO-220FN
h_{FE}	E
Code	-
Basic ordering unit (pieces)	500

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CEO}	–80	-	-	V	$I_C = -1mA$
Collector-base breakdown voltage	BV_{CBO}	–80	-	-	V	$I_C = -50\mu A$
Emitter-base breakdown voltage	BV_{EBO}	–5	-	-	V	$I_E = -50\mu A$
Collector cutoff current	I_{CBO}	-	-	–10	μA	$V_{CB} = -80V$
Emitter cutoff current	I_{EBO}	-	-	–10	μA	$V_{EB} = -4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	–1.5	V	$I_C/I_B = -2A/-0.2A$
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-	–1.5	V	$I_C/I_B = -2A/-0.2A$
DC current transfer ratio	h_{FE}	100	-	200	-	$V_{CE}/I_C = -4V/-1A$
Transition frequency	f_T	-	12	-	MHz	$V_{CE} = -12V$, $I_E = 0.5A$
Output capacitance	C_{ob}	-	80	-	pF	$V_{CB} = -10V$, $I_E = 0A$, $f = 1MHz$