

Power Transistor (80V, 7A)

2SD2611

●Features

- 1) Low saturation voltage, typically $V_{CE(sat)} = 0.3V$ at $I_C / I_B = 4 / 0.4A$.
- 2) Excellent DC current gain characteristics.
- 3) $P_C = 30W$ ($T_C = 25^\circ C$)
- 4) Wide SOA (safe operating area).
- 5) Complements the 2SB1672.

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

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	100	V
Collector-emitter voltage	V_{CE0}	80	V
Emitter-base voltage	V_{EB0}	5	V
Collector current	I_C	7	A(DC)
		10	A(Pulse) *
Collector power dissipation	P_C	2	W
		30	W($T_C=25^\circ C$)
Junction temperature	T_J	150	$^\circ C$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ C$

* Single pulse, $P_w=100ms$

●Packaging specifications and hFE

Type	2SD2611
Package	TO-220FN
hFE	DEF
Code	—
Basic ordering unit (pieces)	500

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CB0}	100	—	—	V	$I_C = 50\mu A$
Collector-emitter breakdown voltage	BV_{CE0}	80	—	—	V	$I_C = 1mA$
Emitter-base breakdown voltage	BV_{EB0}	5	—	—	V	$I_E = 50\mu A$
Collector cutoff current	I_{CB0}	—	—	10	μA	$V_{CB} = 100V$
Emitter cutoff current	I_{EB0}	—	—	10	μA	$V_{EB} = 4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	1	V	$I_C/I_B = 4A/0.4A$ *
Base-emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	$I_C/I_B = 4A/0.4A$ *
DC current transfer ratio	hFE	60	—	320	—	$V_{CE} = 5V$, $I_C = 1A$ *
Transition frequency	f_T	—	5	—	MHz	$V_{CE} = 5V$, $I_E = -0.5A$, $f = 5MHz$ *
Output capacitance	C_{ob}	—	150	—	pF	$V_{CB} = 10V$, $I_E = 0A$, $f = 1MHz$

* Measured using pulse current