

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_{CBO}	100	V
Collector-emitter voltage	V_{CEO}	80	V
Emitter-base voltage	V_{EBO}	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 - +150	$^\circ C$

* Single pulse, $P_w=100ms$

●Packaging specifications and h_{FE}

Type	2SD2611
Package	TO-220FN
h_{FE}	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_{CBO}	100	-	-	V	$I_C = 50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	80	-	-	V	$I_C = 1mA$
Emitter-base breakdown voltage	BV_{EBO}	5	-	-	V	$I_E = 50\mu A$
Collector cutoff current	I_{CBO}	-	-	10	μA	$V_{CB} = 100V$
Emitter cutoff current	I_{EBO}	-	-	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	h_{FE}	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