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) Pc = 30W (Tc = 25°C)
4) Wide SOA (safe operating area).
5) Complements the 2SB1672.

●Absolute maximum ratings (Ta = 25°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(Tc=25°C)
Junction temperature	Tj	150	°C
Storage temperature	Tstg	−55 ~ +150	°C

* Single pulse, Pw=100ms

●Packaging specifications and h_{FE}

Type	2SD2611
Package	TO-220FN
h_{FE}	DEF
Code	–
Basic ordering unit (pieces)	500

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions	
Collector-base breakdown voltage	BV_{CBO}	100	–	–	V	I_C = 50μA	
Collector-emitter breakdown voltage	BV_{CEO}	80	–	–	V	I_C = 1mA	
Emitter-base breakdown voltage	BV_{EBO}	5	–	–	V	I_E = 50μA	
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	Cob	–	150	–	pF	V_{CB} = 10V , I_E = 0A , f = 1MHz	

* Measured using pulse current