Power Transistor (100V, 5A)

2SD1897

●**Features**

1) Low saturation voltage, typically $V_{CE(sat)}$ =0.3V at I_C / I_B=3A / 0.3A.
2) Excellent h_{FE} current characteristics.
3) P_C=30 W. (T_C=25℃)

●**Absolute maximum ratings (Ta=25℃)**

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	100	V
Collector-emitter voltage	V_{CEO}	100	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	5	A (DC)
		10	A (Pulse) ✻
Collector power dissipation	P_C	2	W
		30	W (T_C=25℃)
Junction temperature	Tj	150	℃
Storage temperature	Tstg	−55～+150	℃

✻ Single pulse, Pw=100ms

●**Packaging specifications and h_{FE}**

Type	2SD1897
Package	TO-220FP
h_{FE}	E
Code	—
Basic ordering unit (pieces)	500

●**Electrical characteristics (Ta=25℃)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	100	—	—	V	I_C=50 μA
Collector-emitter breakdown voltage	BV_{CEO}	100	—	—	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	5	—	—	V	I_E=50 μA
Collector cutoff current	I_{CBO}	—	—	10	μA	V_{CB}=100V
Emitter cutoff current	I_{EBO}	—	—	10	μA	V_{EB}=5V
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.3	1.0	V	I_C/I_B=3A/0.3A ✻
Base-emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	I_C/I_B=3A/0.3A ✻
DC current transfer ratio	h_{FE}	100	—	200	—	V_{CE}/I_C=5V/1A
Transition frequency	f_T	—	8	—	MHz	V_{CE}=5V, I_E=−0.5A, f=5MHz ✻
Output capacitance	Cob	—	100	—	pF	V_{CB}=10V, I_E=0A, f=1MHz

✻ Measured using pulse current.

(96-768-D91)

Power Transistor (15V, 0.5A)

2SD1757K

●**Features**

1) Low saturation voltage, typically $V_{CE(sat)}$ =8mV at I_C / I_B=10mA / 1mA.
2) Optimal for muting.

●**Absolute maximum ratings (Ta=25℃)**

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	15	V
Emitter-base voltage	V_{EBO}	6.5	V
Collector current	I_C	0.5	A
Collector power dissipation	P_C	0.2	W
Junction temperature	Tj	150	℃
Storage temperature	Tstg	−55～+150	℃

●**Packaging specifications and h_{FE}**

Type	2SD1757K
Package	SMT3
h_{FE}	QRS
Marking	AA ✻
Code	T146
Basic ordering unit (pieces)	3000

✻ Denotes h_{FE}

●**Electrical characteristics (Ta=25℃)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	30	—	—	V	I_C=50 μA
Collector-emitter breakdown voltage	BV_{CEO}	15	—	—	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	6.5	—	—	V	I_E=50 μA
Collector cutoff current	I_{CBO}	—	—	0.5	μA	V_{CB}=20V
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	V_{EB}=4V
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.1	0.4	V	I_C/I_B=500mA/50mA
DC current transfer ratio	h_{FE}	120	—	560	—	V_{CE}/I_C=3V/100mA
Transition frequency	f_T	—	150	—	MHz	V_{CE}=5V, I_E=−50mA, f=100MHz
Output capacitance	Cob	—	15	—	pF	V_{CB}=10V, I_E=0A, f=1MHz

(94S-314-D95)

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