

Power Transistor (80V, 1A)

2SD1898 / 2SD1733 / 2SD1768S / 2SD1863

●Features

- 1) High V_{CEO} , $V_{CEO}=80V$
- 2) High I_C , $I_C=1A$ (DC)
- 3) Good h_{FE} linearity
- 4) Low V_{CE} (sat)
- 5) Complements the 2SB1260 / 2SB1241 / 2SB1181

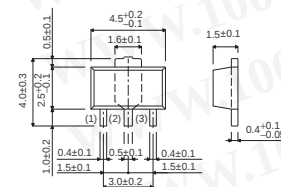
● Structure

Epitaxial planer type
NPN silicon transistor

勝特力材料 886-3-5753170
勝特力電子(上海) 86-21-34970699
勝特力電子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

●Dimensions (Unit : mm)

2SD1898

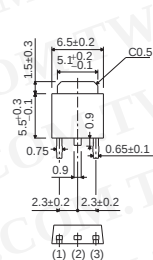


ROHM : MPT3
EIAJ : SC-62

- (1) Base
- (2) Collector
- (3) Emitter

Abbreviated symbol : DF

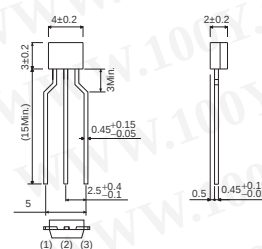
2SD1733



ROHM : CPT3
EIAJ : SC-63

- (1) Base
- (2) Collector
- (3) Emitter

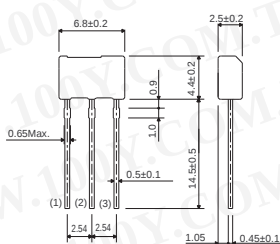
2SD1768S

ROHM : SPT
EIAJ : SC-72

- (1) Emitter
- (2) Collector
- (3) Base

Taping specifications

2SD1863



Taping specifications

- (1) Emitter
- (2) Collector
- (3) Base

ROHM : ATV

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	120	V
Collector-emitter voltage	V _{CE0}	80	V
Emitter-base voltage	V _{EB0}	5	V
Collector current	I _c	1	A (DC)
		2	A (Pulse) *1
Collector power dissipation	P _c	0.5	W
		2	W *3
		1	W
		10	W (Tc=25°C)
		0.3	W
		1	W *2
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

*1 Pw=20ms, duty=1 / 2

*2 Printed circuit board 1.7mm thick, collector copper plating 1cm² or larger.

*3 When mounted on a 40×40×0.7mm ceramic board.

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●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	120	—	—	V	I _c =50μA
Collector-emitter breakdown voltage	BV _{CE0}	80	—	—	V	I _c =1mA
Emitter-base breakdown voltage	BV _{EB0}	5	—	—	V	I _E =50μA
Collector cutoff current	I _{CB0}	—	—	1	μA	V _{CB} =100V
Emitter cutoff current	I _{EB0}	—	—	1	μA	V _{EB} =4V
DC current transfer ratio	2SD1863	h _{FE} *	120	—	390	—
	2SD1733, 2SD1898		120	—	390	—
	2SD1768S		120	—	390	—
Collector-emitter saturation voltage	V _{CE(sat)}	—	0.15	0.4	V	I _c /I _B =500mA/20mA
Transition frequency	f _T	—	100	—	MHz	V _{CE} =10V, I _E =-50mA, f=100MHz
Output capacitance	C _{ob}	—	20	—	pF	V _{CB} =10V, I _E =0A, f=1MHz

* Measured using pulse current

●Packaging specifications and h_{FE}

Type	h _{FE}	Package	Taping			
		Code	T100	TL	TP	TV2
		Basic ordering unit (pieces)	1000	2500	5000	2500
2SD1898	QR		○	—	—	—
2SD1733	QR		—	○	—	—
2SD1768S	QR		—	—	○	—
2SD1863	QR		—	—	—	○

h_{FE} values are classified as follows :

Item	Q	R
h _{FE}	120 to 270	180 to 390

●Electrical characteristic curves

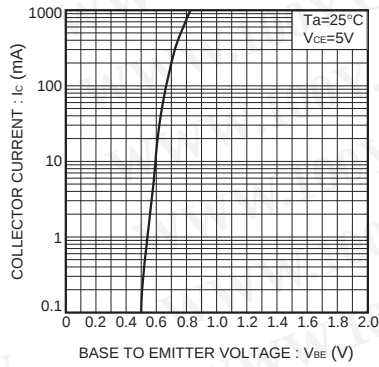


Fig.1 Grounded emitter propagation characteristics

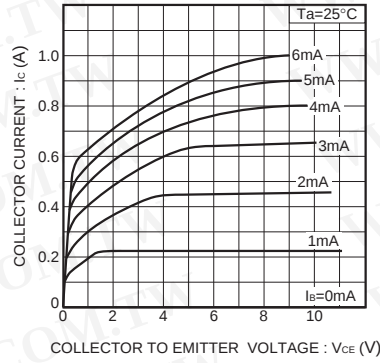


Fig.2 Grounded emitter output characteristics

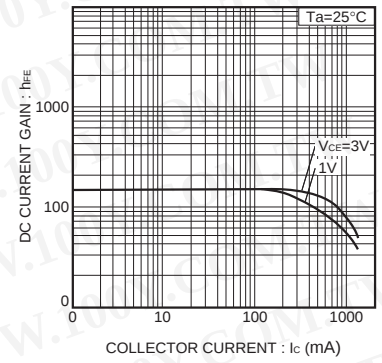


Fig.3 DC current gain vs. collector current

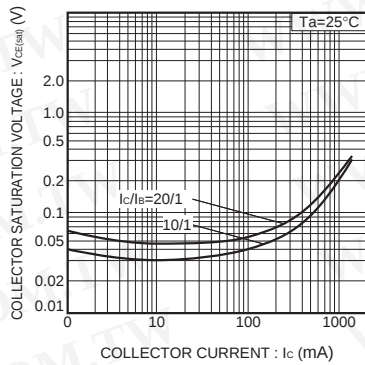


Fig.4 Collector-emitter saturation voltage vs. collector current

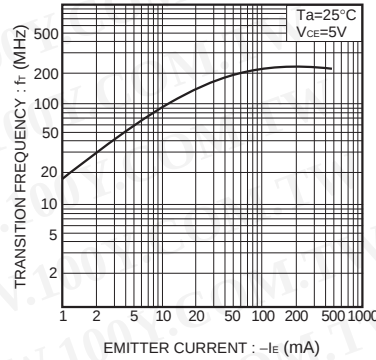
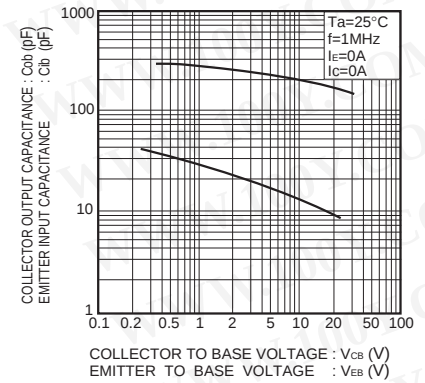
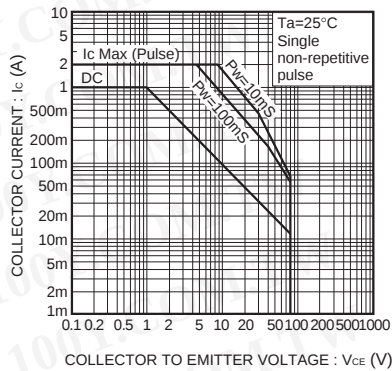
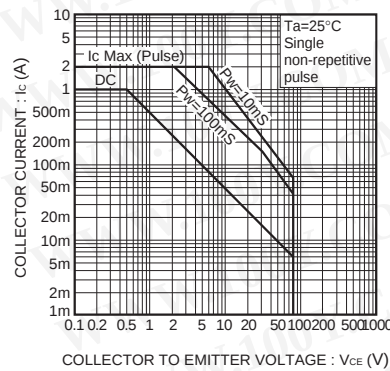


Fig.5 Gain bandwidth product vs. emitter current

Fig.6 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltageFig.7 Safe operating area
(2SD1863)Fig.8 Safe operating area
(2SD1898)

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