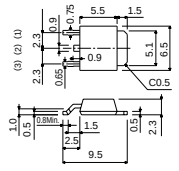
High-current gain Power Transistor (60V, 3A)

2SD2318

●Features

1) High DC current gain.
2) Low saturation voltage.
   (Typ. V_{CE}(sat) =0.5V at I_C / I_B=2A / 0.5A)
3) Complements the 2SB1639.

●External dimensions (Units : mm)



ROHM : CPT3
EIAJ : SC-63

(1) Base(Gate)
(2) Collector(Drain)
(3) Emitter(Source)

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	80	V
Collector-emitter voltage	V_{CEO}	60	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	3	A
		4.5	A(Pulse) *
Collector power dissipation	P_C	1	W
		15	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	2SD2318
Package	CPT3
h_{FE}	UV
Code	TL
Basic ordering unit (pieces)	2500

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	80	-	-	V	I_C=50μA
Collector-emitter breakdown voltage	BV_{CEO}	60	-	-	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	6	-	-	V	I_E=50μA
Collector cutoff current	I_{CBO}	-	-	100	μA	V_{CB}=80V
Emitter cutoff current	I_{EBO}	-	-	100	μA	V_{EB}=6V
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	1.0	V	I_C/I_B=2A/0.05A *
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-	1.5	V	I_C/I_B=2A/0.05A *
DC current transfer ratio	h_{FE}	560	-	1800	-	V_{CE}/I_C=4V/0.5A
Transition frequency	f_T	-	50	-	MHz	V_{CE}=5V, I_E=-0.2A, f=10MHz
Output capacitance	Cob	-	60	-	pF	V_{CB}=10V, I_E=0A, f=1MHz *

* Measured using pulse current.