

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

2SD2318

●Features

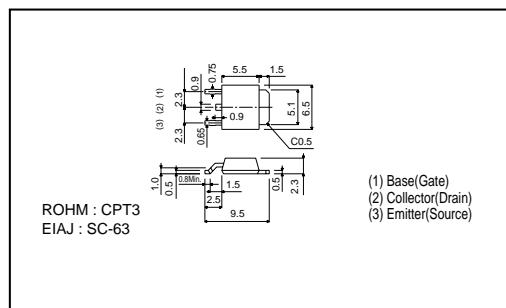
- 1) High DC current gain.
- 2) Low saturation voltage.
(Typ. $V_{CE}(\text{sat}) = 0.5\text{V}$ at $I_c / I_b = 2\text{A} / 0.5\text{A}$)
- 3) Complements the 2SB1639.

●Absolute maximum ratings ($T_a=25^\circ\text{C}$)

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 4.5	A(Pulse) *
Collector power dissipation	P_c	1 15	W($T_c=25^\circ\text{C}$)
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~+150	°C

* Single pulse $P_w=100\text{ms}$

●External dimensions (Units : mm)



●Packaging specifications and h_{FE}

Type	2SD2318
Package	CPT3
h_{FE}	UV
Code	TL
Basic ordering unit (pieces)	2500

●Electrical characteristics ($T_a=25^\circ\text{C}$)

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

* Measured using pulse current.