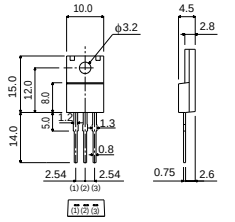
Power Transistor (60V, 3A)

2SD2394

●Features

1) Low saturation voltage.
   (Typ. $V_{CE(sat)}$ = 0.3V at I_C / I_B = 2A / 0.2A)
2) Excellent DC current gain characteristics.
3) Wide SOA (safe operating area).

●External dimensions (Units : mm)



ROHM : TO-220FN

●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}	7	V
Collector current	I_C	3	A(DC)
	I_{CP}	6	A(Pulse) *
Collector power dissipation	P_C	2	W
		25	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	2SD2394
Package	TO-220FN
h_{FE}	EF
Code	–
Basic ordering unit (pieces)	500

●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}	7	–	–	V	I_E = 50μA
Collector cutoff current	I_{CBO}	–	–	10	μA	V_{CB} = 60V
Emitter cutoff current	I_{EBO}	–	–	10	μA	V_{EB} = 7V
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	1	V	I_C/I_B = 2A/0.2A
	$V_{CE(sat)}$	–	–	0.8	V	
Base-emitter saturation voltage	$V_{BE(sat)}$	–	–	1.5	V	I_C/I_B = 2A/0.2A *
DC current transfer ratio	h_{FE}	100	–	320	–	V_{CE}/I_C = 5V/0.5A
Transition frequency	f_T	–	8	–	MHz	V_{CE} = 5V , I_E = –0.5A , f = 5MHz
Output capacitance	Cob	–	35	–	pF	V_{CB} = 10V , I_E = 0A , f = 1MHz *

* Measured using pulse current.