

2SD2394

- 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).

The drawing shows the mechanical specifications of the TO-220FN package. The top view includes dimensions for the overall width (10.0 mm), body width (12.0 mm), and mounting tab width (4.5 mm). It also shows the pin pitch (2.54 mm) and individual pin widths (0.75 mm for the base/gate, 2.6 mm for the collector/drain, and 2.54 mm for the emitter/source). The side view shows the package height (15.0 mm) and the mounting tab thickness (2.8 mm).

Legend:

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

ROHM : TO-220FN

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	80	V
Collector-emitter voltage	V _{CE0}	60	V
Emitter-base voltage	V _{EB0}	7	V
Collector current	I _c	3	A(DC)
	I _{CP}	6	A(Pulse) *
Collector power dissipation	P _c	2	W
		25	W(T _c =25°C)
Junction temperature	T _j	150	°C
Storage temperature	T _{st0}	-55 ~ +150	°C

* Single pulse, Pw=100ms

Type	2SD2394
Package	TO-220FN
h _{FE}	EF
Code	—
Basic ordering unit (pieces)	500

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	80	—	—	V	$I_C = 50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	60	—	—	V	$I_C = 1mA$
Emitter-base breakdown voltage	BV_{EBO}	7	—	—	V	$I_E = 50\mu A$
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	C_{ob}	—	35	—	pF	$V_{CB} = 10V, I_E = 0A, f = 1MHz$

* Measured using pulse current.