

# For Power Amplification (60V, 3A)

## 2SD2394

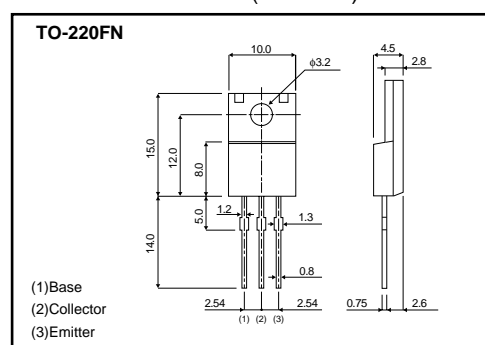
### ●Structure

NPN Silicon Triple Diffused Planar Transistor

### ●Features

- 1) Low  $V_{CE(sat)}$ .
- 2) Excellent electrical characteristics of DC current Gain  $h_{FE}$ .
- 3) Wide SOA.

### ●External dimensions (Unit : mm)



### ●Applications

Low frequency amplifier

### ●Complements

PNP	NPN
2SB1565	2SD2394

### ●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	DC	$I_C$	3 A(DC)
	Pulse	$I_{CP}$	6 A(Pulse)*1
Collector power dissipation	$P_C$	2	W(Ta=25°C)
		25	W(Tc=25°C)
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

\*1  $P_W=100ms$ , single pulse

### ●Packaging specifications and $h_{FE}$

Type	Package	Taping
2SD2394	hFE	Code
	Basic ordering unit (pieces)	500
2SD2394	EF	○

$h_{FE}$  values are classified as follows:

Item	E	F
$h_{FE}$	100 to 200	160 to 320

### ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	$BV_{CEO}$	60	—	—	V	$I_C=1mA$
Collector-base breakdown voltage	$BV_{CBO}$	80	—	—	V	$I_C=50\mu A$
Emitter-base breakdown voltage	$BV_{EBO}$	7	—	—	V	$I_E=50\mu A$
Collector cutoff current	$I_{CBO}$	—	—	10	$\mu A$	$V_{CB}=60V$
Emitter cutoff current	$I_{EBO}$	—	—	10	$\mu A$	$V_{EB}=7V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	1.0	V	$I_C/I_B=2A/0.2A$ *1
Base-emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	$I_C/I_B=2A/0.2A$ *1
DC current gain	$h_{FE}$	100	—	320	—	$V_{CE}=5V$ , $I_C=0.5A$
Transition frequency	$f_T$	—	8	—	MHz	$V_{CE}=5V$ , $I_E=-0.5A$ , $f=5MHz$ *1
Collector output capacitance	$C_{ob}$	—	35	—	pF	$V_{CB}=10V$ , $I_E=0A$ , $f=1MHz$

\*1 Pulse test

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