

# For Power Amplification (50V, 3A)

## 2SD2395

### ●Structure

NPN Silicon Epitaxial Planar Transistor

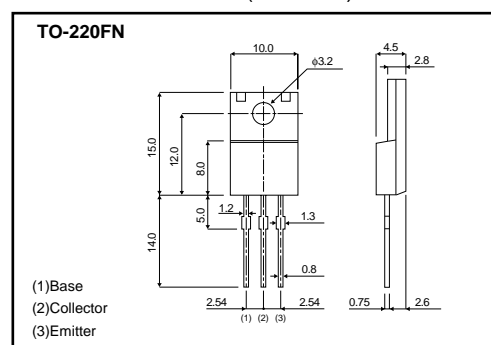
### ●Features

- 1) Low  $V_{CE(sat)}$ .
- 2) Wide SOA.

### ●Applications

Relay drive  
DC-DC converter  
Stabilized power supply

### ●External dimensions (Unit : mm)



### ●Complements

PNP	NPN
2SB1566	2SD2395

### ●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	60	V
Collector-emitter voltage	$V_{CEO}$	50	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	DC	$I_C$	3 A(DC)
	Pulse	$I_{CP}$	4.5 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
2SD2395	$h_{FE}$ Code	—
	Basic ordering unit (pieces)	500
2SD2395	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	$BV_{CEO}$	50	—	—	V	$I_C=1mA$
Collector-base breakdown voltage	$BV_{CBO}$	60	—	—	V	$I_C=50\mu A$
Emitter-base breakdown voltage	$BV_{EBO}$	5	—	—	V	$I_E=50\mu A$
Collector cutoff current	$I_{CBO}$	—	—	1.0	$\mu A$	$V_{CB}=60V$
Emitter cutoff current	$I_{EBO}$	—	—	1.0	$\mu A$	$V_{EB}=4V$
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	—	$V_{CE}=3V, I_C=0.5A$
Transition frequency	$f_T$	—	100	—	MHz	$V_{CE}=5V, I_E=-0.5A, f=30MHz$ *1
Collector output capacitance	$C_{ob}$	—	35	—	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

\*1 Pulse test

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