

2SB1565

Transistors

# For Power Amplification (–60V, –3A)

## 2SB1565

●Structure

PNP Silicon Epitaxial Planar Transistor

●Features

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

●Applications

Low frequency power amplifier  
Stereophonic output  
Stabilization of power supply

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	–60	V
Collector-emitter voltage	$V_{CEO}$	–60	V
Emitter-base voltage	$V_{EBO}$	–7	V
Collector current	DC	$I_C$	–3 A
	Pulse	$I_{CP}$	–6 A *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

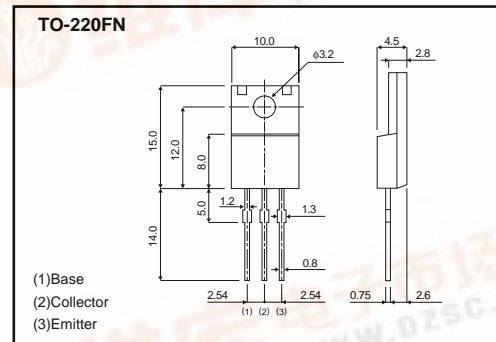
\*1 Pw=100ms, non repetitive pulse

●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	$BV_{CBO}$	–60	–	–	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	$V_{CE(sat)}$	–	–	–1.5	V	$I_C/I_B = -2A/-0.2A$ *1
DC current gain	$h_{FE}$	100	–	320	–	$V_{CE} = -5V, I_C = -0.5A$ *1,2
Transition frequency	$f_T$	–	15	–	MHz	$V_{CE} = -5V, I_E = 0.5A, f = 5MHz$ *1
Collector output capacitance	$C_{ob}$	–	50	–	pF	$V_{CB} = -10V, I_E = 0A, f = 1MHz$

\*1 Single pulse \*2  $h_{FE}$  rank

●External dimensions (Unit : mm)



●Complements

PNP	NPN
2SB1565	2SD2394

●Packaging specifications and  $h_{FE}$

Type	$h_{FE}$	Package	Taping
		Code	–
2SB1565	EF	Basic ordering unit (pieces)	500
			○

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

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

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