

/ Descriptions

TO-220F PNP Silicon PNP transistor in a TO-220F Plastic Package.

/ Features

Low $V_{CE(sat)}$, excellent DC current gain characteristics, wide SOA.

/ Applications

Audio frequency power amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	E	F
h_{FE} Range	100 200	160 320

/ Absolute Maximum Ratings(Ta=25)

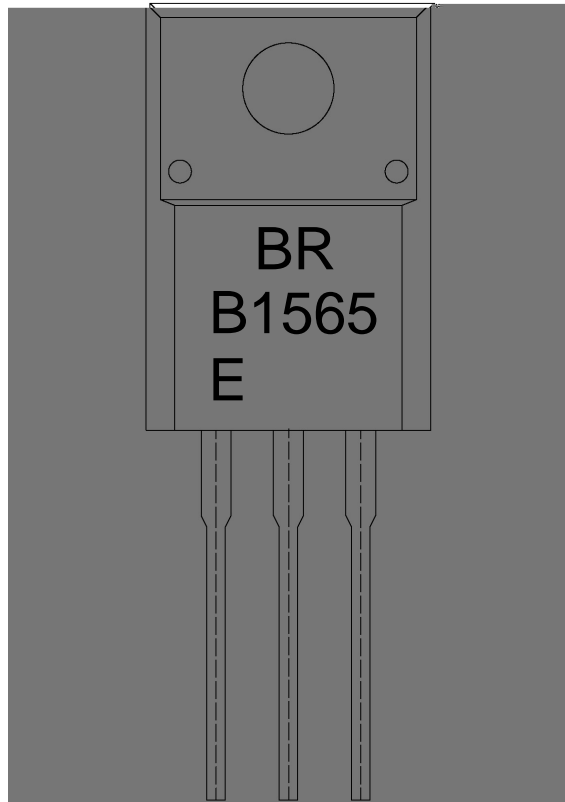
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-80	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-7.0	V
Collector Current - Continuous	$I_{C(DC)}$	-3.0	A
Collector Current – Continuous(Pulse)	$I_{C(pulse)}$	-6.0	A
Collector Power Dissipation	P_C	2.0	W
Collector Power Dissipation	$P_C (T_c=25)$	25	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=-50 A$	-80			V
Collector to Base Breakdown Voltage	V_{CEO}	$I_C=-1.0mA$	-60			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-50 A$	-7.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-60V$			-10	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-7.0V$			-10	A
DC Current Gain	h_{FE}	$V_{CE}=-5.0V$ $I_C=-500mA$	100		320	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-2.0A$ $I_B=-200mA$			-1.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-2.0A$ $I_B=-200mA$			-1.5	V
Transition Frequency	f_T	$V_{CE}=-5.0V$ $f=5.0MHz$ $I_E=0.5A$		15		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10V$ $f=1.0MHz$ $I_E=0$		50		pF

2SB1565
Rev.E Mar.-2016

/ Marking Instructions



BR

B1565

E: h_{FE}

Note:

BR: Company Code.

B1565: Product Type.

E: h_{FE} Classifications Symbol

****: Lot No. Code, code change with Lot No.

() / Temperature Profile for Dip Soldering(Pb-Free)



- | | | | | | | |
|---|-------|-----|-----------|--------|---|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | Note: | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 | | 5±0.5sec; | | 2.Peak Temp.:255±5 , Duration:5±0.5sec. | |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 /sec. | |

/ Resistance to Soldering Heat Test Conditions

270±5 10±1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type	Units				Dimension (unit mm ³)		

/ TUBE

Package Type	Units				Dimension (unit mm ³)		

/ Notices