Ordering number : ENN694F

PNP / NPN Epitaxial Planar Silicon Transistors

2SB815 / 2SD1048

General-Purpose AF Amplifier Applications

Features

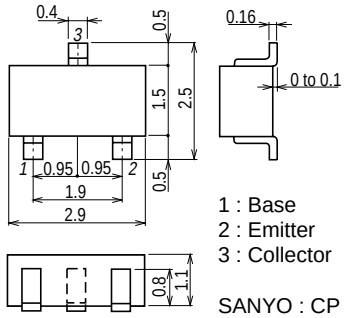
- Ultrasmall package allows miniaturization in end products.
- Large current capacity (I_C=0.7A) and low-saturation voltage.

Package Dimensions

unit : mm

2018B

[2SB815 / 2SD1048]



Specifications

( ) : 2SB815

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(–)20	V
Collector-to-Emitter Voltage	V_{CEO}		(–)15	V
Emitter-to-Base Voltage	V_{EBO}		(–)5	V
Collector Current	I_C		(–)0.7	A
Collector Current (Pulse)	I_{CP}		(–)1.5	A
Collector Dissipation	P_C		200	mW
Junction Temperature	Tj		125	°C
Storage Temperature	Tstg		–55 to +125	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(–)15V, I_E=0			(–)0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(–)4V, I_C=0			(–)0.1	μA
DC Current Gain	$h_{FE}1$	V_{CE}=(–)2V, I_C=(–)50mA	(200*)200*		(600*)900*	
	$h_{FE}2$	V_{CE}=(–)2V, I_C=(–)500mA	80			

* : The 2SB815, 2SD1048 are classified by 50mA h_{FE} as follows :

Continued on next page.

2SB815	200	**B6**	400	300	**B7**	600			
2SD1048	200	**X6**	400	300	**X7**	600	450	**X8**	900

Note : Marking : B (2SB815), X (2SD1048)

h_{FE} rank : 6, 7 (2SB815), 6, 7, 8 (2SD1048)

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Continued from preceding page.

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gain-Bandwidth Product	f_T	V_{CE}=(–)10V, I_C=(–)50mA		250		MHz
Output Capacitance	Cob	V_{CB}=(–)10V, f=1MHz		(13)8		pF
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)1	I_C=(–)5mA, I_B=(–)0.5mA		(–15)10	(–35)25	mV
	V_{CE}(sat)2	I_C=(–)100mA, I_B=(–)10mA		(–60)30	(–120)80	mV