

/ Descriptions

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

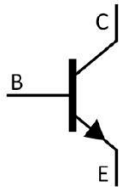
/ Features

2SB1063
Excellent h_{FE} , wide ASO, high f_T . complementary to 2SB1063.

/ Applications

High power amplifier application.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	Q	P
h_{FE} Range	60 120	100 200

/ Absolute Maximum Ratings(Ta=25)

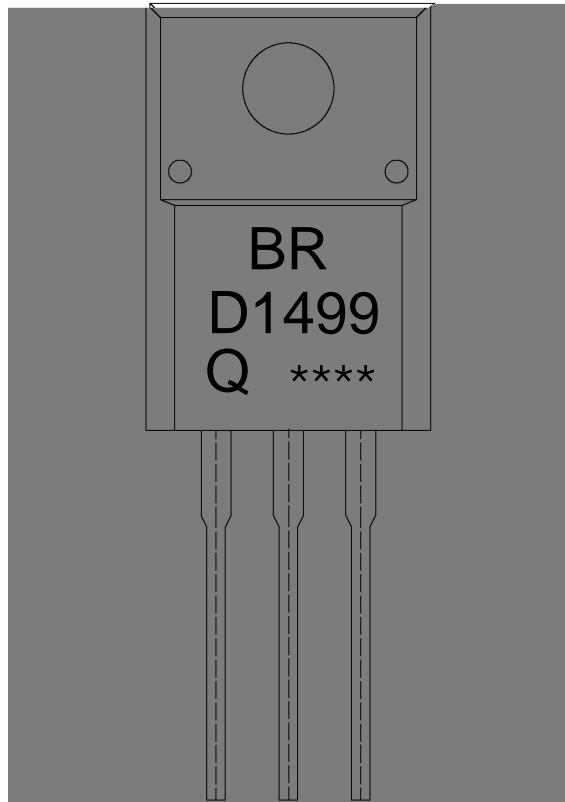
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	100	V
Collector to Emitter Voltage	V_{CEO}	100	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	5.0	A
Collector Current – Continuous(Pulse)	I_{CP}	8.0	A
Collector Power Dissipation	P_C	2.0	W
Collector Power Dissipation	$P_C(T_C=25)$	40	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 Cut-Off Current	I_{CBO}	$V_{CB}=100V$ $I_E=0$			50	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=3.0V$ $I_C=0$			50	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5.0V$ $I_C=1.0A$	60		200	
	$h_{FE(2)}$	$V_{CE}=5.0V$ $I_C=3.0A$	20			
	$h_{FE(3)}$	$V_{CE}=5.0V$ $I_C=20mA$	20			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3.0A$ $I_B=0.3A$			2.0	V
Base to Emitter Voltage	V_{BE}	$V_{CE}=5.0V$ $I_C=3.0A$			1.8	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=0.5A$ $f=1.0MHz$		20		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $f=1.0MHz$		90		pF

2SD1499

/ Marking Instructions



BR

D1499

Q: h_{FE}

Note:

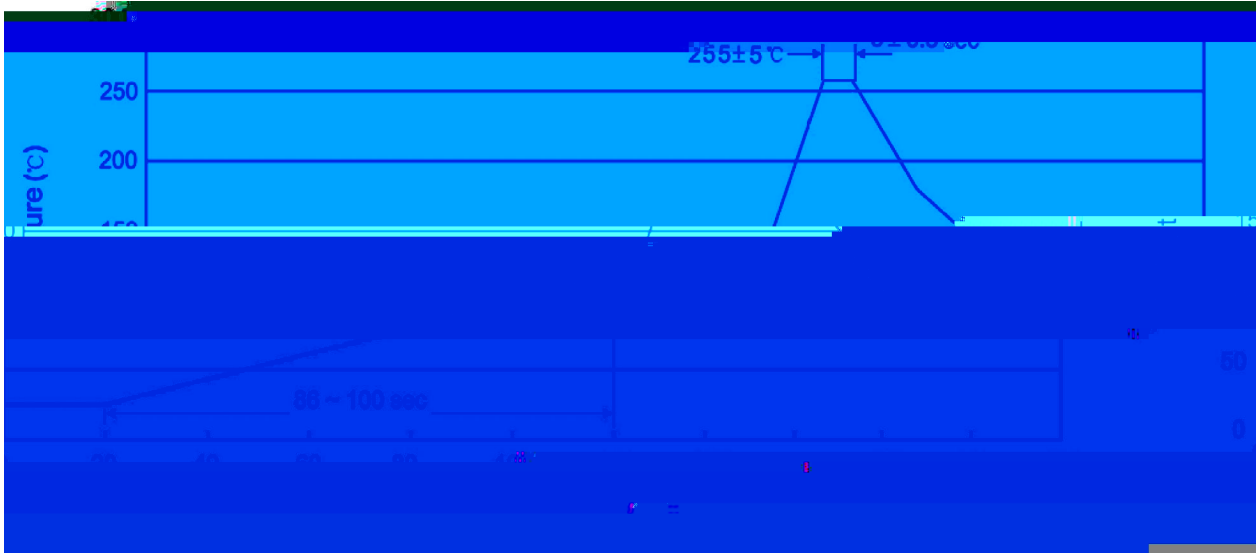
BR: Company Code.

D1499: Product Type.

Q: h_{FE} Classifications Symbol

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

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



Note:

- | | | | | | |
|---|-------|-----|-------|----------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 | | 5±0.5 | sec; | 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)
T/TT13 131-0.96 0 0 6.48 222.3 283.0403	Time/Bag Tw451411NET 02x1 Tt1U07511r/Box In		