/ Descriptions

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

/ Features

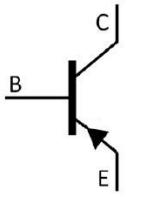
h_{FE} - TO-220

High forward current transfer ratio h_{FE} which has satisfactory linearity, low collector to emitter saturation voltage $V_{CE(sat)}$ Full-pack package which can be installed to the heat sink with one screw.

/ Applications

For low-frequency power amplification.

/ Equivalent Circuit



/ Pinning

PIN1 Base PIN 2 Collector PIN 3 Emitter

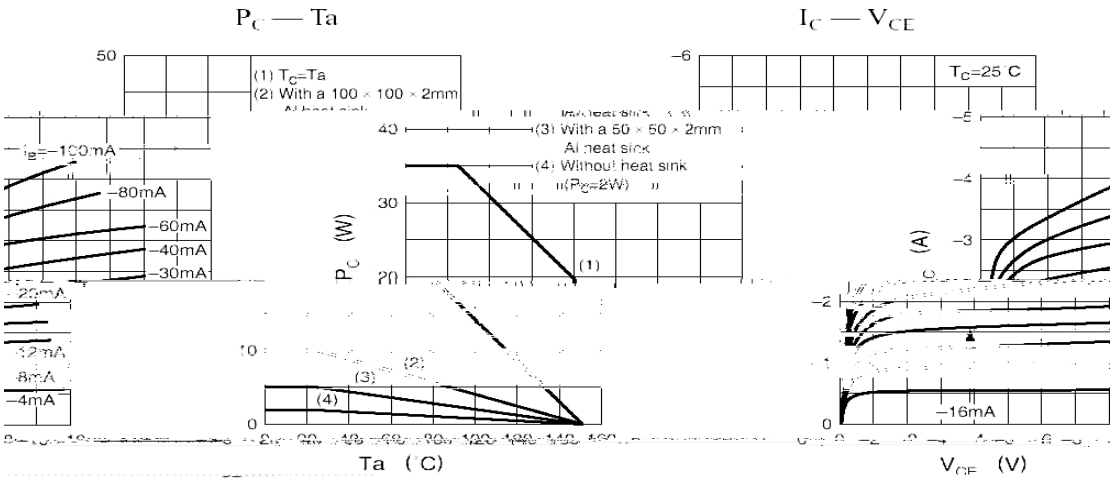
/ h_{FE} Classifications & Marking

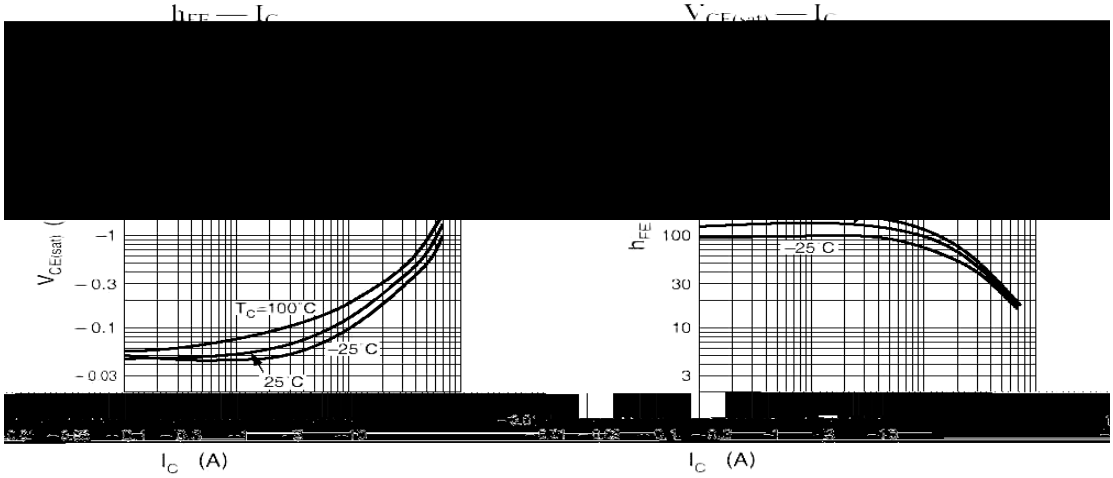
h_{FE} Classifications Symbol	Q	P
h_{FE} Range	70 150	120 250

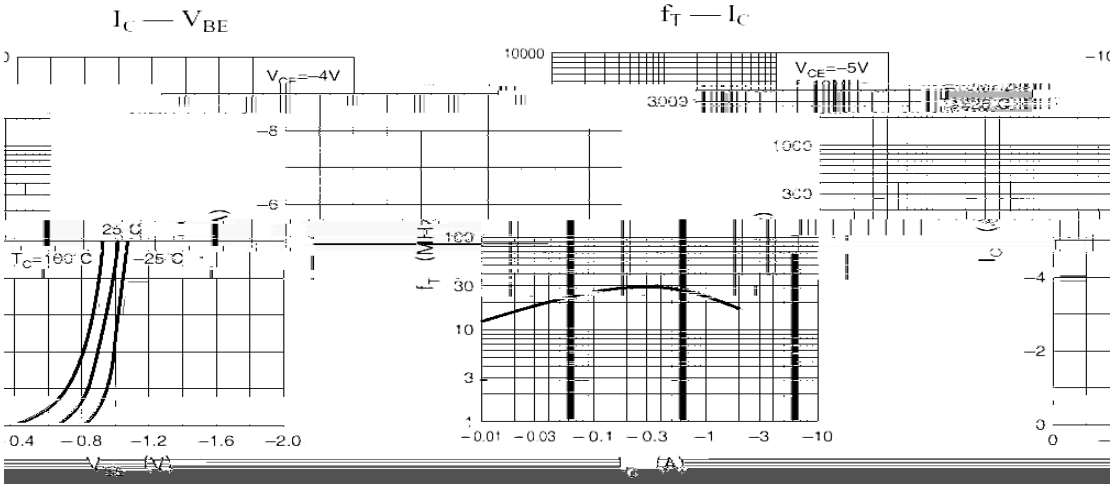
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-60	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-3.0	A
Collector Current – Continuous(Pulse)	I_{CP}	-5.0	A
Collector Power Dissipation	P_C	2.0	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=-30mA I_B=0	-60			V
Collector Cut-Off Current	I_{CEO}	V_{CE}=-30V I_B=0			-300	A
Collector Cut-Off Current	I_{CES}	V_{CE}=-60V V_{BE}=0			-200	A
Emitter Cut-Off Current	I_{EBO}	V_{EB}=-5V I_C=0			-1	mA
DC Current Gain	$h_{FE(1)}$	V_{CE}=-4.0V I_C=-1.0A	70		250	
	$h_{FE(2)}$	V_{CE}=-4.0V I_C=-3.0 A	10			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C				

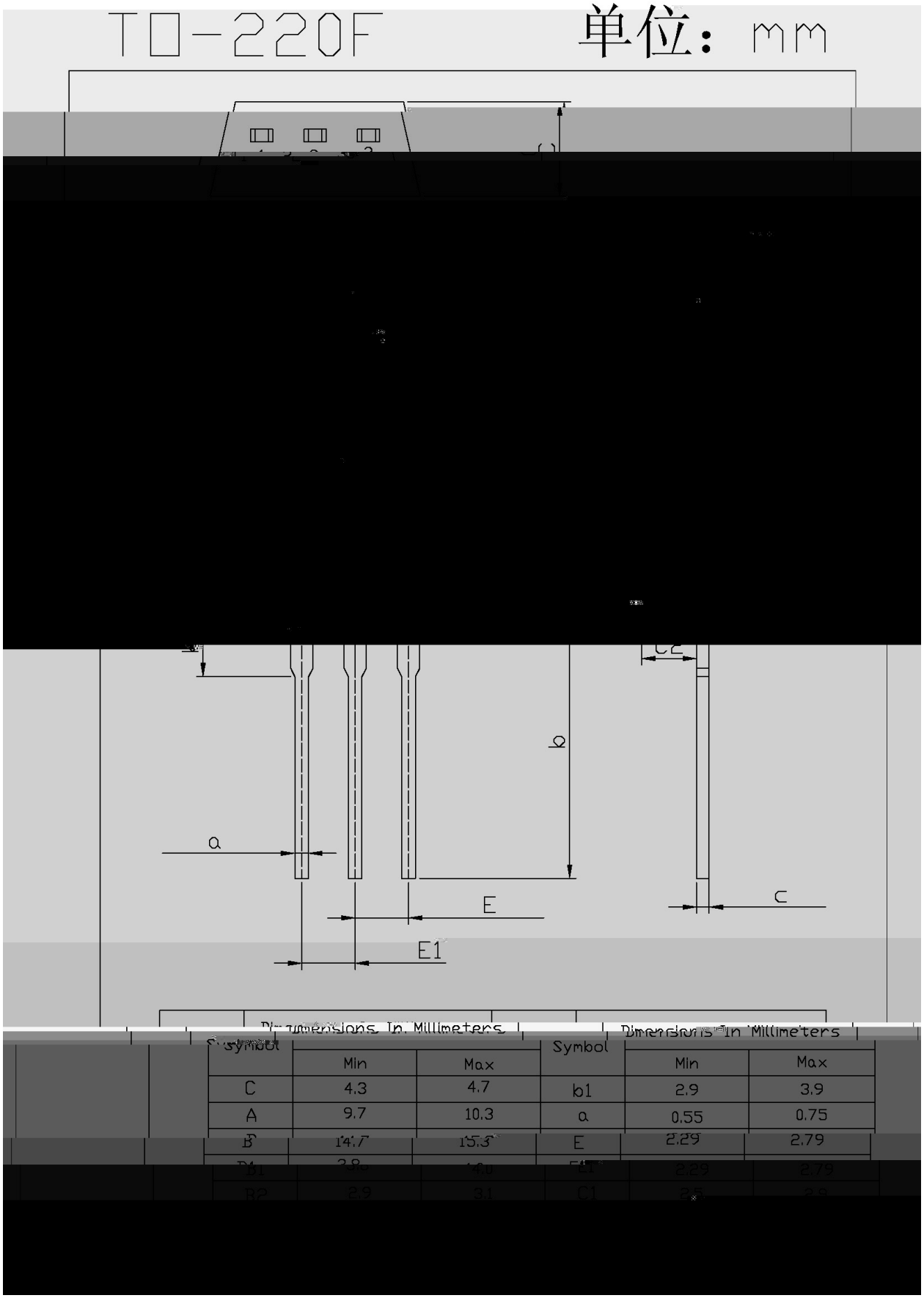
/ Electrical Characteristic Curve





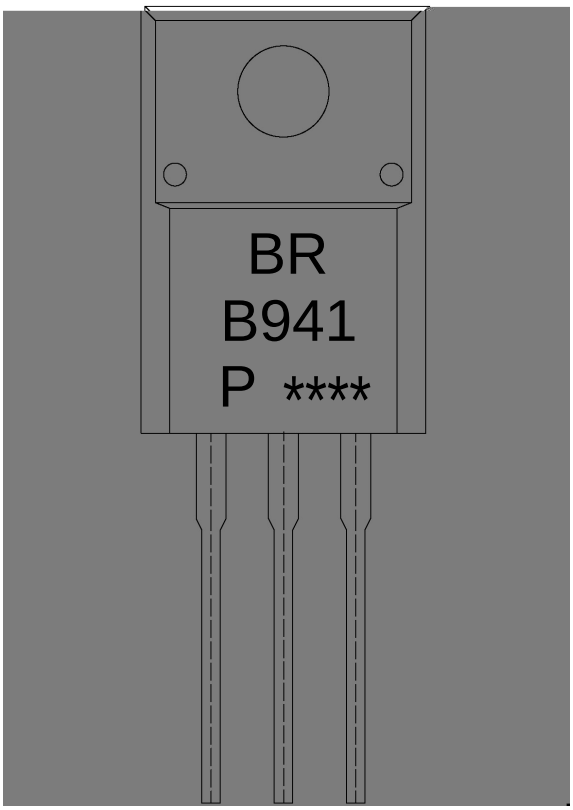


/ Package Dimensions



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
C	4.3	4.7	b1	2.9	3.9
A	9.7	10.3	a	0.55	0.75
B	14.7	15.3	E	2.29	2.79
D1	2.8	4.0	E1	2.29	2.79
D2	2.9	3.1	C1	2.5	2.9

/ Marking Instructions



BR

B941

Q: h_{FE}

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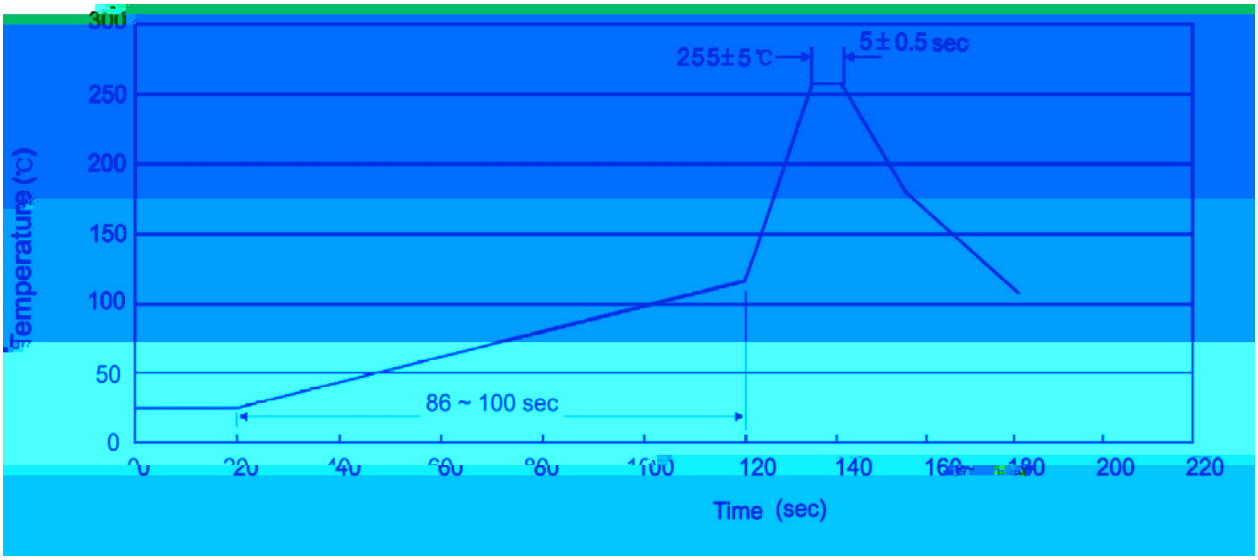
Note:

BR:	Company Code.
B941:	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±0.5sec;	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 封装形式	Units 包装数量