

Rev.F Mar.-2016

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

, KTA1658

Good linearity of h_{FE} , complementary to KTA1658.

General purpose amplifier.

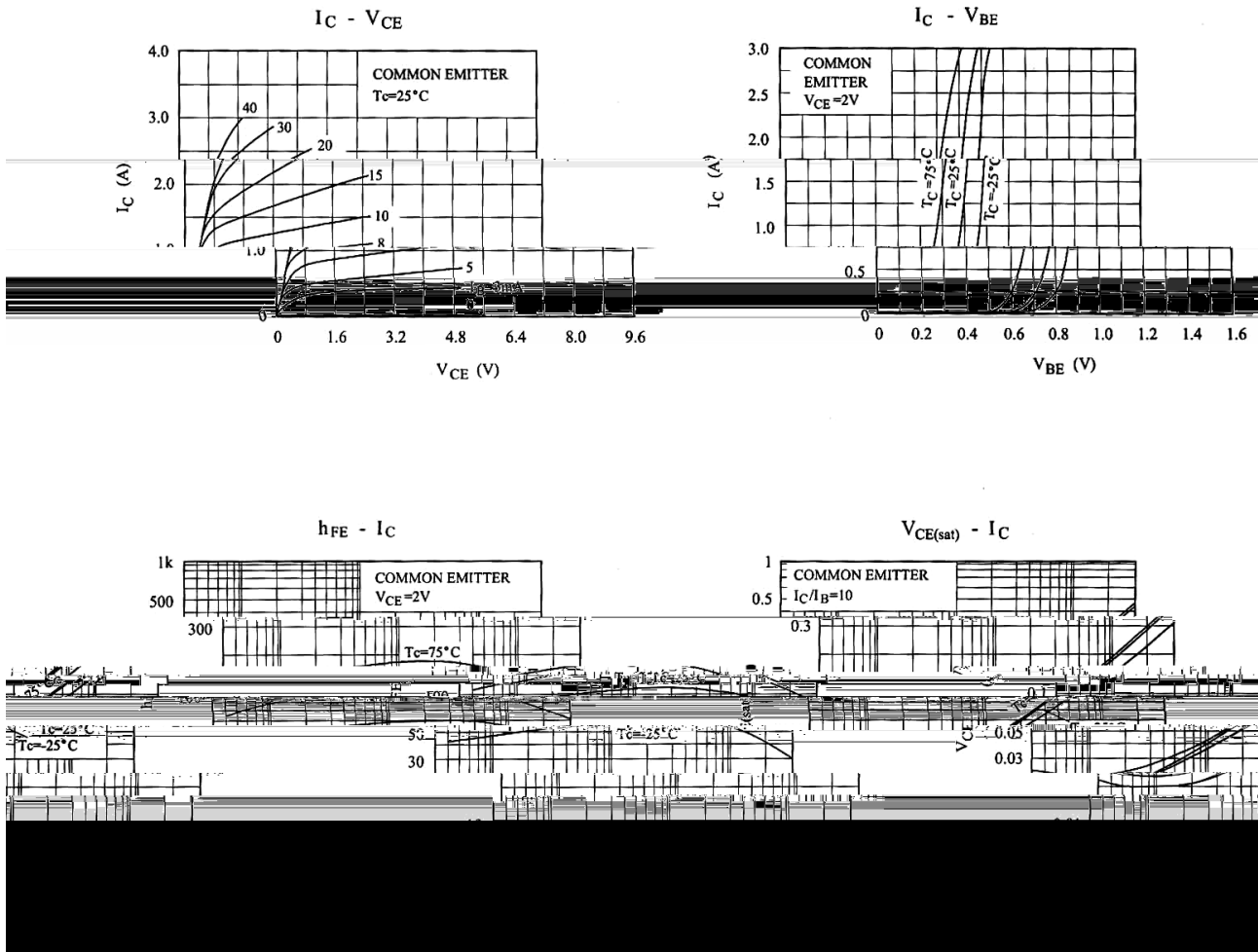


PIN1 Base PIN 2 Collector PIN 3 Emitter

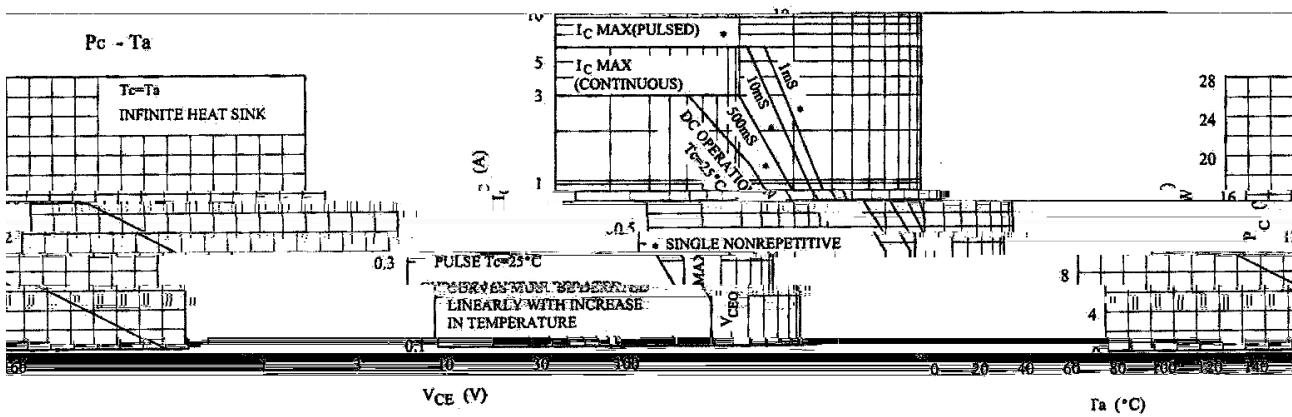
h_{FE} Classifications Symbol	O	Y
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Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	3.0	A
Base Current	I_B	0.3	A
Collector Power Dissipation	P_C	1.5	W
Collector Power Dissipation	$P_C(T_c=25^\circ\text{C})$	15	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10\text{mA}$ $I_B=0$	30			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=20\text{V}$ $I_E=0$			1.0	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0\text{V}$ $I_C=0$			1.0	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0\text{V}$ $I_C=0.5\text{A}$	70		240	
	$h_{FE(2)}$	$V_{CE}=2.0\text{V}$ $I_C=2.5\text{A}$	25			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0\text{A}$ $I_B=0.2\text{A}$		0.3	0.8	V
Base to Emitter Voltage	V_{BE}	$V_{CE}=2.0\text{V}$ $I_C=0.5\text{A}$		0.75	1.0	V
Transition Frequency	f_T	$V_{CE}=2.0\text{V}$ $I_C=0.5\text{A}$		100		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}$ $I_E=0$ $f=1.0\text{MHz}$		3.5		pF

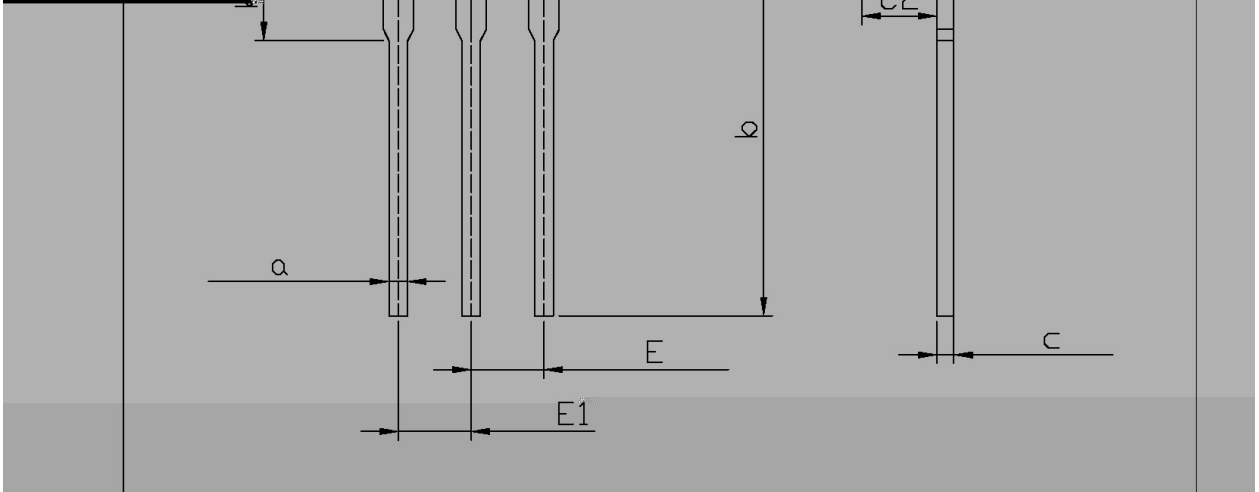


SAFE OPERATING AREA

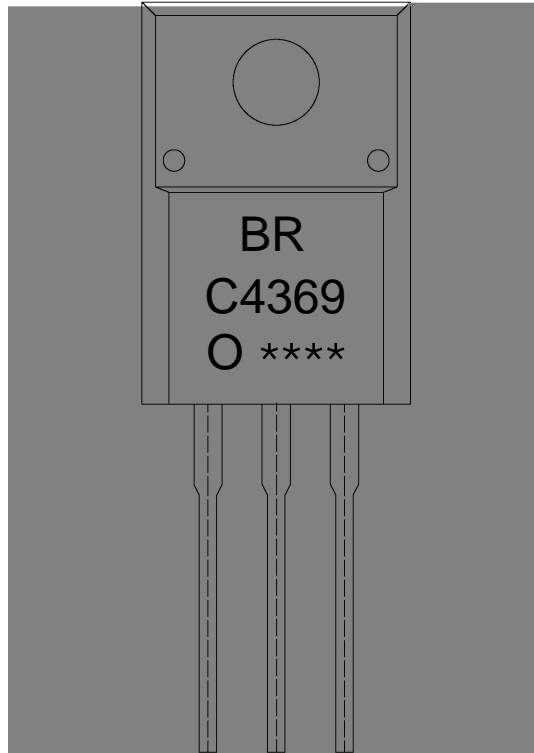


TO-220F

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		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
E1	2.8	3.3			



BR

C4369

O: h_{FE}

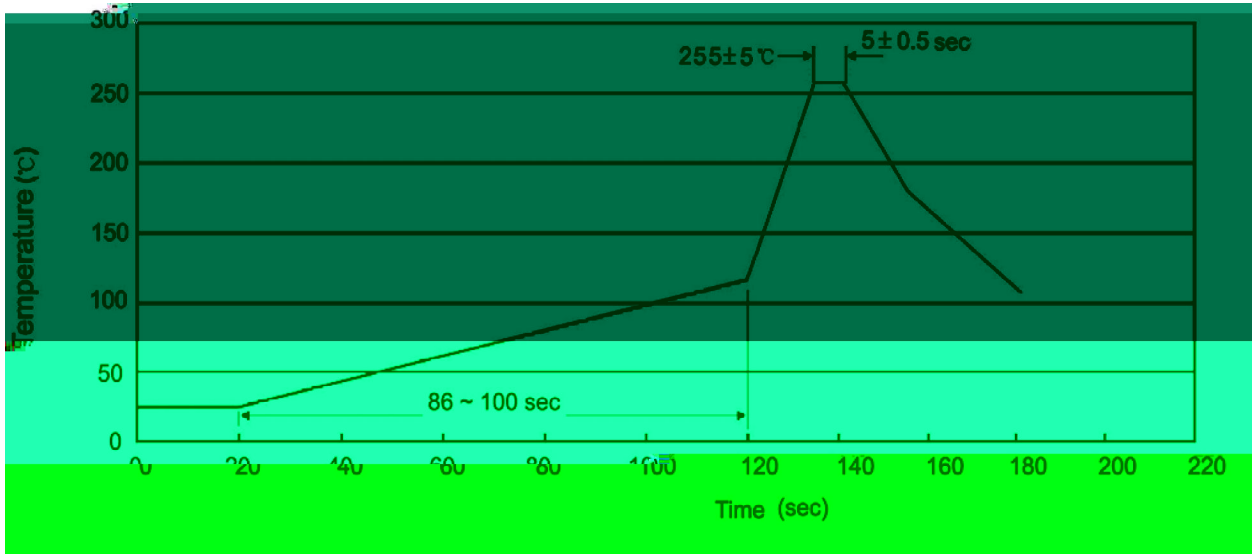
Note:

BR: Company Code.

C4369: Product Type.

O: h_{FE} Classifications Symbol

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



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. |

270±5

10±1 sec.

Temp:270±5°C

Time:10±1 sec

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-220F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-220F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180