

/ Descriptions

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

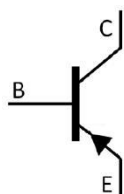
/ Features

, KTC2026
Low collector saturation voltage, complementary to KTC2026.

/ Applications

General purpose amplifier.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	Y	GR
h_{FE} Range	100 200	150 300

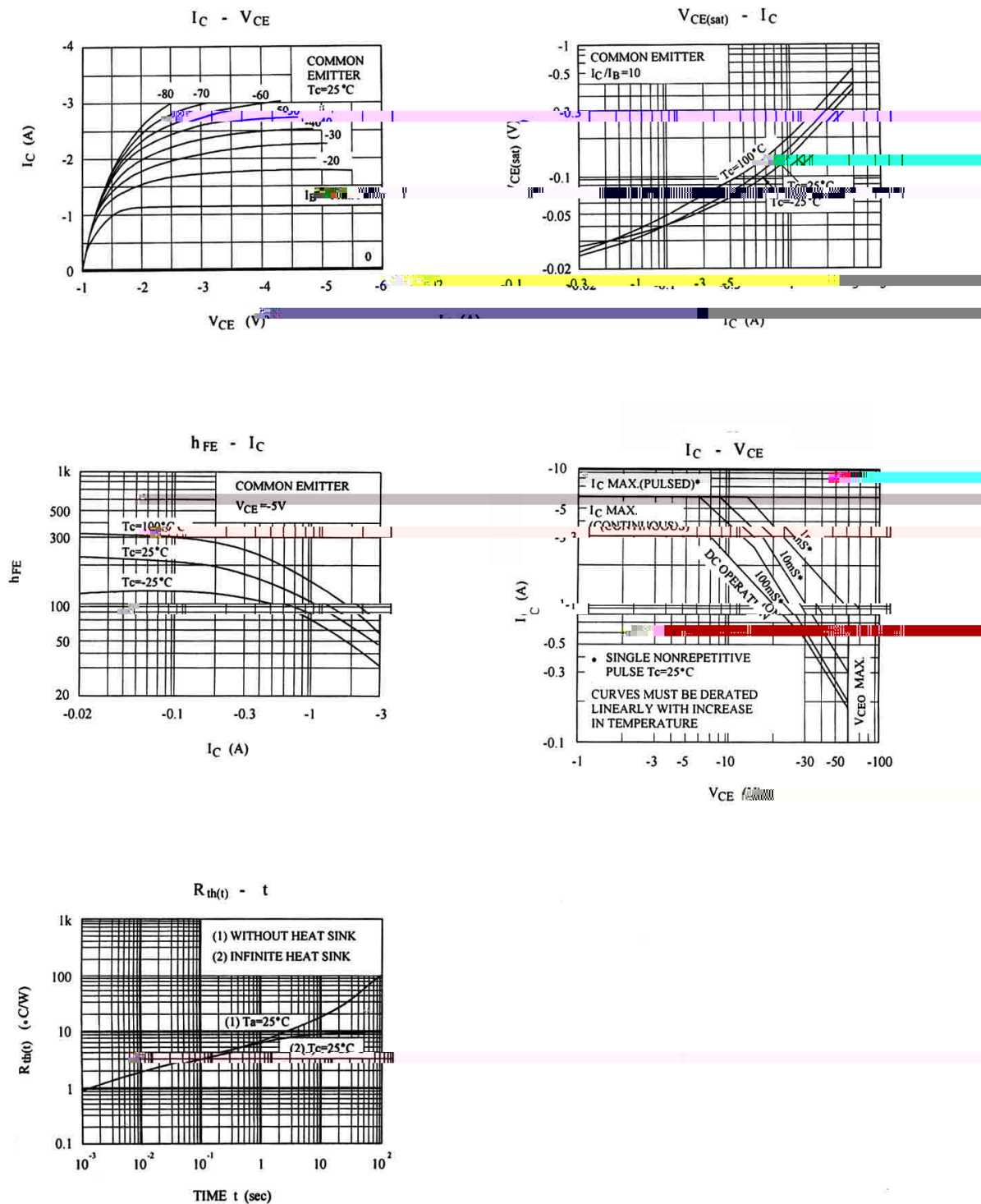
/ Absolute Maximum Ratings(Ta=25)

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}	-7.0	V
Collector Current - Continuous	I_C	-3.0	A
Base Current	I_B	-0.5	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)

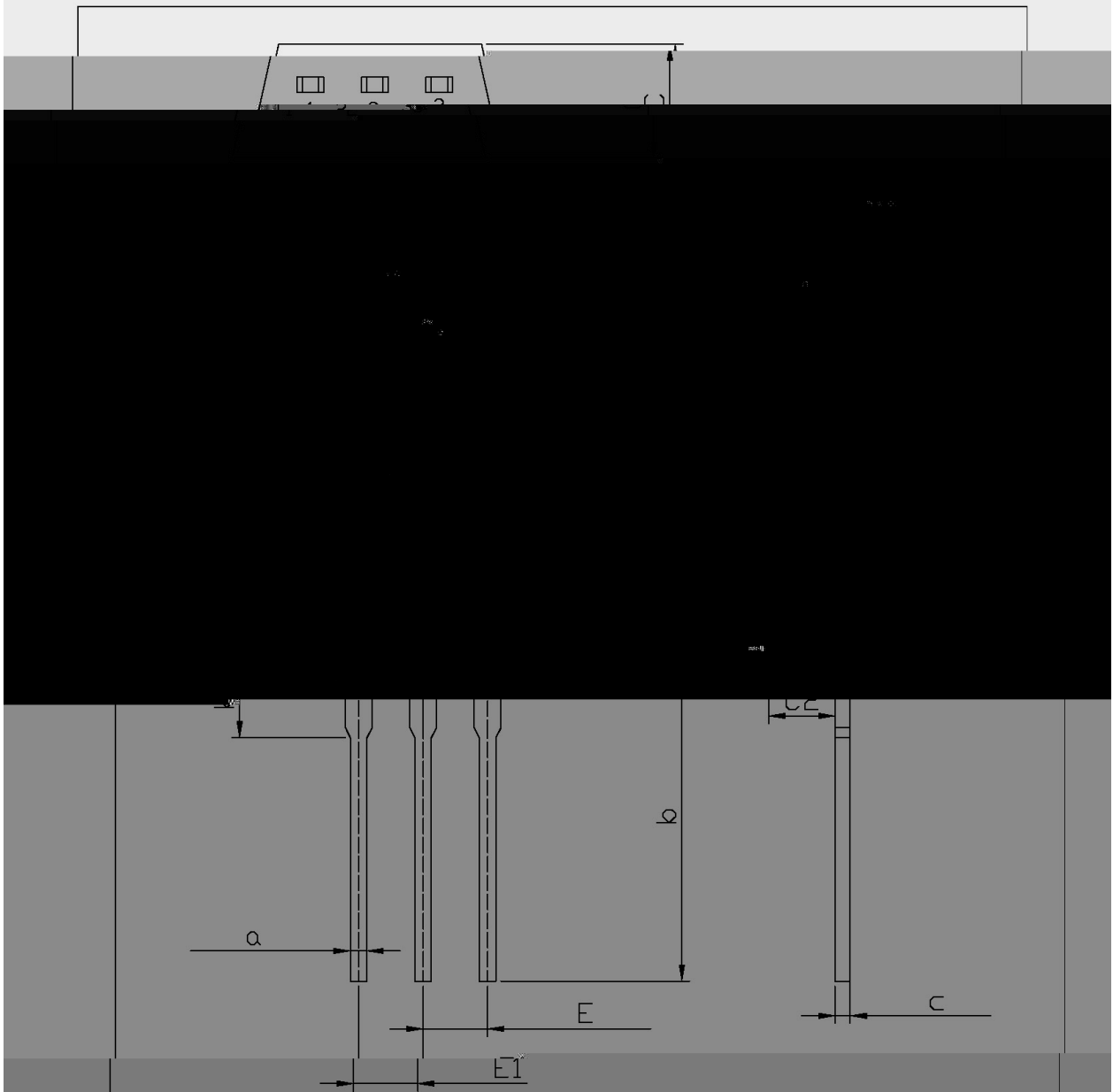
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-50mA$ $I_B=0$	-60			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-60V$ $I_E=0$			-100	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-7.0V$ $I_C=0$			-100	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-5.0V$ $I_C=-0.5A$	100		300	
	$h_{FE(2)}$	$V_{CE}=-5.0V$ $I_C=-3.0A$	20			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-2.0A$ $I_B=-0.2A$		-0.25	-1.0	V
Collector to Emitter Voltage	V_{BE}	$V_{CE}=-5.0V$ $I_C=-0.5A$		-0.7	-1.0	V
Transition Frequency	f_T	$V_{CE}=-5.0V$ $I_C=-0.5A$		30		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$		45		pF
Turn-On Time	t_{on}	$I_C=10I_{B1}=-10I_{B2}=-2.0A$ $V_C=-30V$		0.4		μS
Storage Time	t_{stg}			1.7		
Fall Time	t_f			0.5		

/ Electrical Characteristic Curve



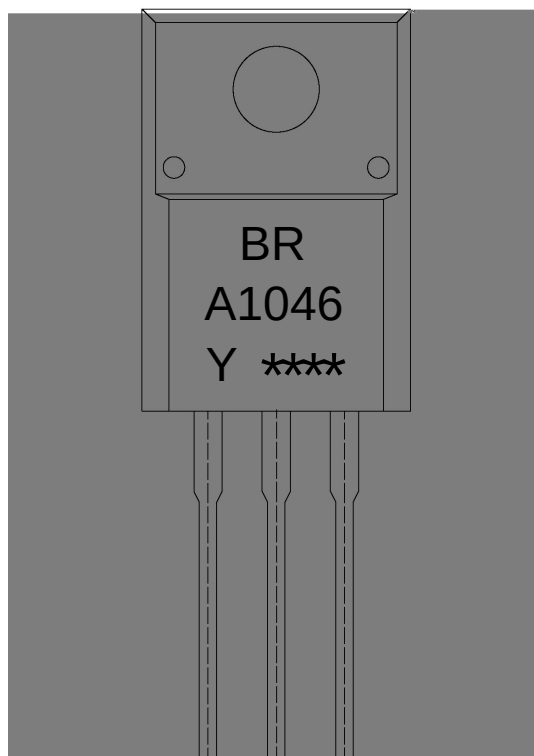
T0-220F

单位: 



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

/ Marking Instructions



BR

A1046

Y: h_{FE}

Note:

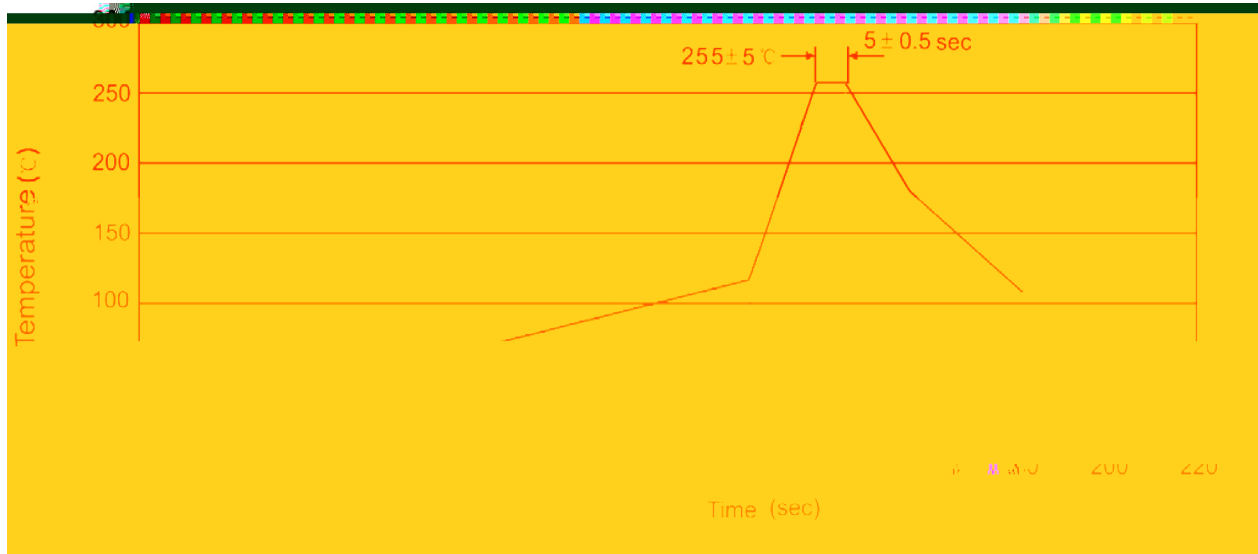
BR: Company Code.

A1046: Product Type.

Y: 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	Units					Dimension (unit mm3)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension (unit mm3)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices