

/ Descriptions

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

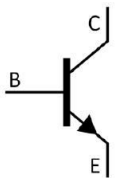
/ Features

Good Linearity of h_{FE} , complementary pair with KTB1368.

/ Applications

General Purpose Application.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	R	O	Y
h_{FE} Range	40~80	70~140	120~240

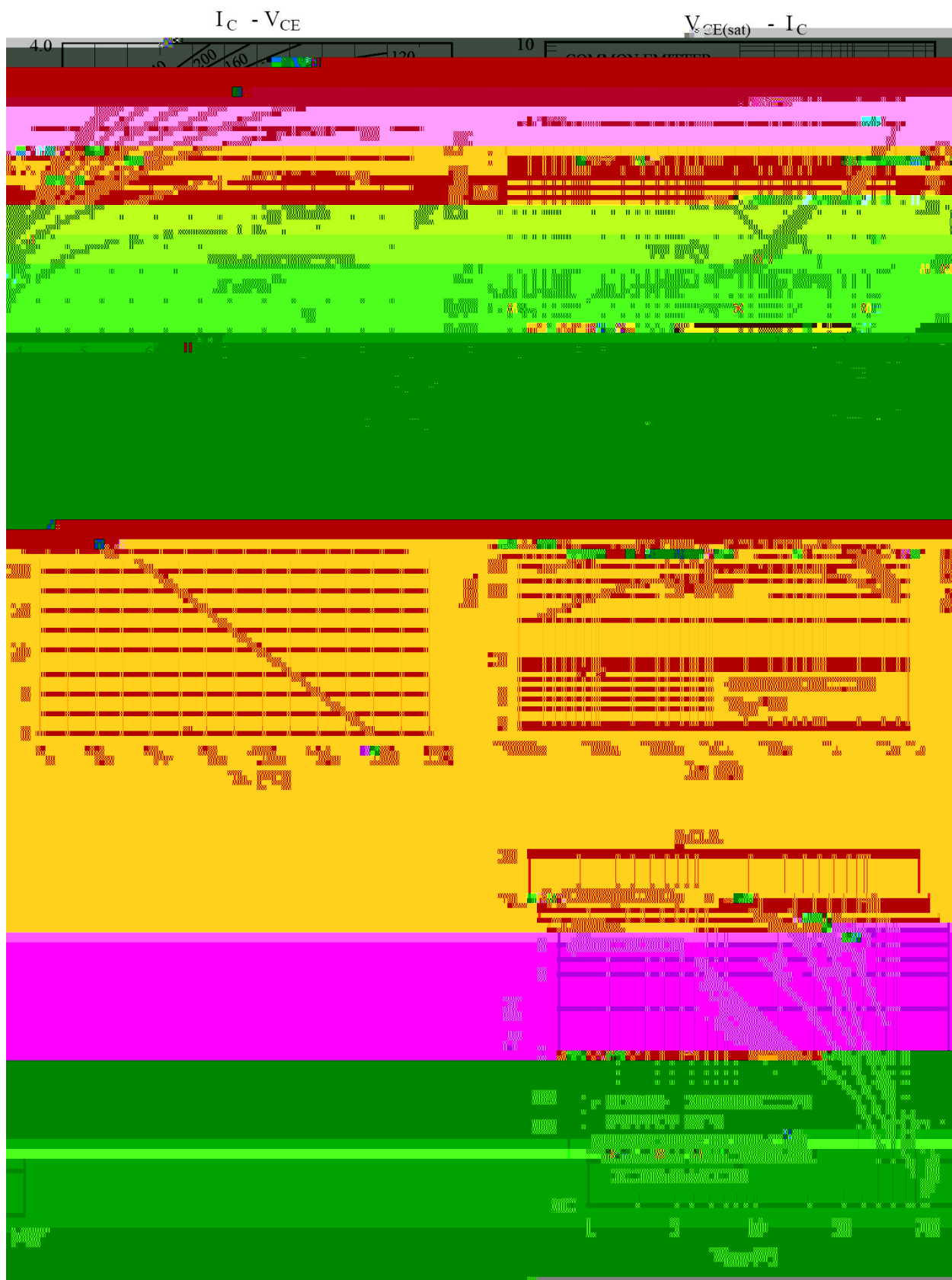
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	80	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	4	A
Base Current	I_B	0.4	A
Collector Power Dissipation	$P_C(T_C=25^{\circ}C)$	25	W
Junction Temperature	T_J	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

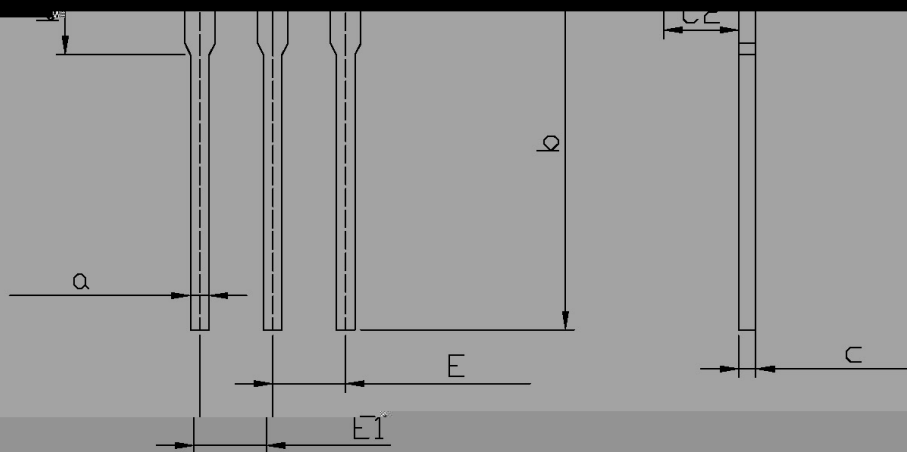
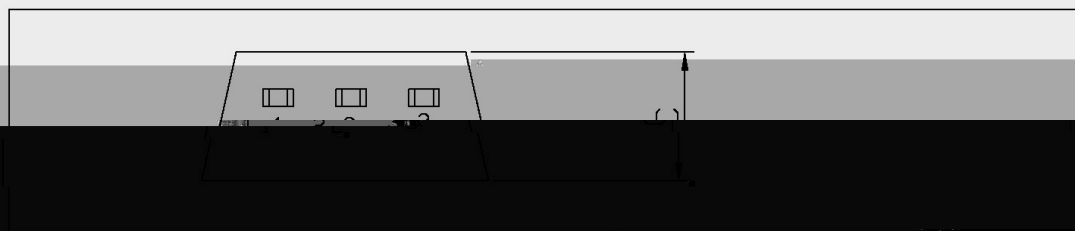
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C=50mA$ $I_B=0$	80			V
Emitter-Base Breakdown Voltage	V_{EBO}	$I_C=10mA$ $I_B=0$	5			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=80V$ $I_E=0$			30	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			100	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5.0V$ $I_C=0.5A$	40		240	
	$h_{FE(2)}$	$V_{CE}=5.0V$ $I_C=3.0A$	15	50		
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3.0A$ $I_B=0.3A$		0.45	1.5	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=5.0V$ $I_C=3.0A$		1.0	1.5	V
Transition Frequency	f_T	$I_C=0.5A$ $V_{CE}=5.0V$		8.0		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		90		pF

/ Electrical Characteristic Curve



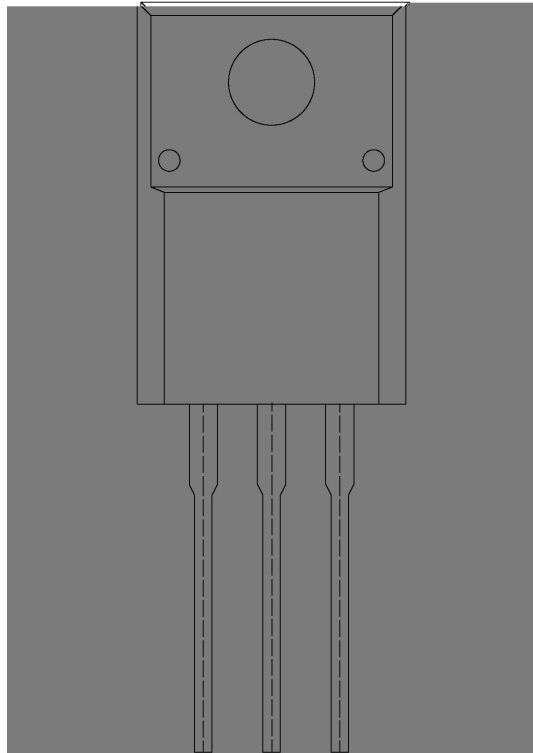
T0-220F

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



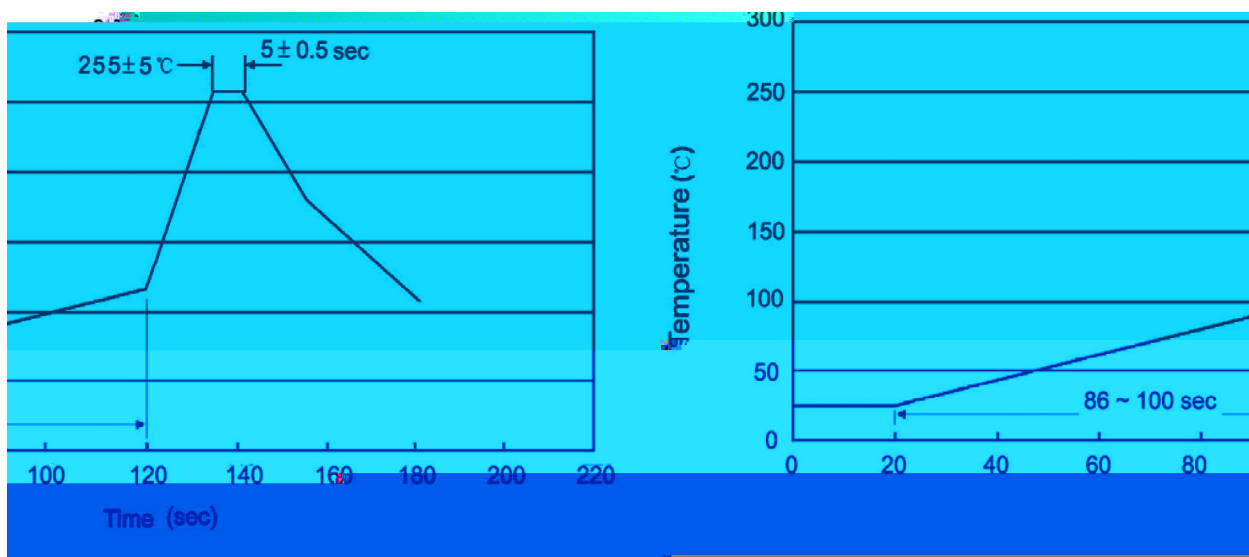
Note:

BR: Company Code.

D2060: Product Type.

R: h_{FE} Classifications Symbol.

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



Note:

1. Preheating: 25~150 , Time: 60~90sec.
2. Peak Temp.: 255 ± 5 , Duration: 5 ± 0.5sec.
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)		

/ TUBE

Package Type	Units					Dimension (unit mm3)		

/ Notices