

/ Descriptions

TO-251 NPN Silicon NPN transistor in a TO-251 Plastic Package.

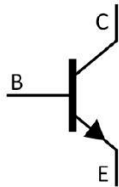
/ Features

， KTA1042I
Low collector-emitter saturation voltage, complementary to KTA1042I.

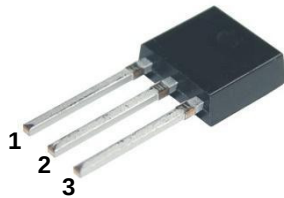
/ Applications

General purpose amplifier.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	O	Y
h_{FE} Range	70 140	120 240

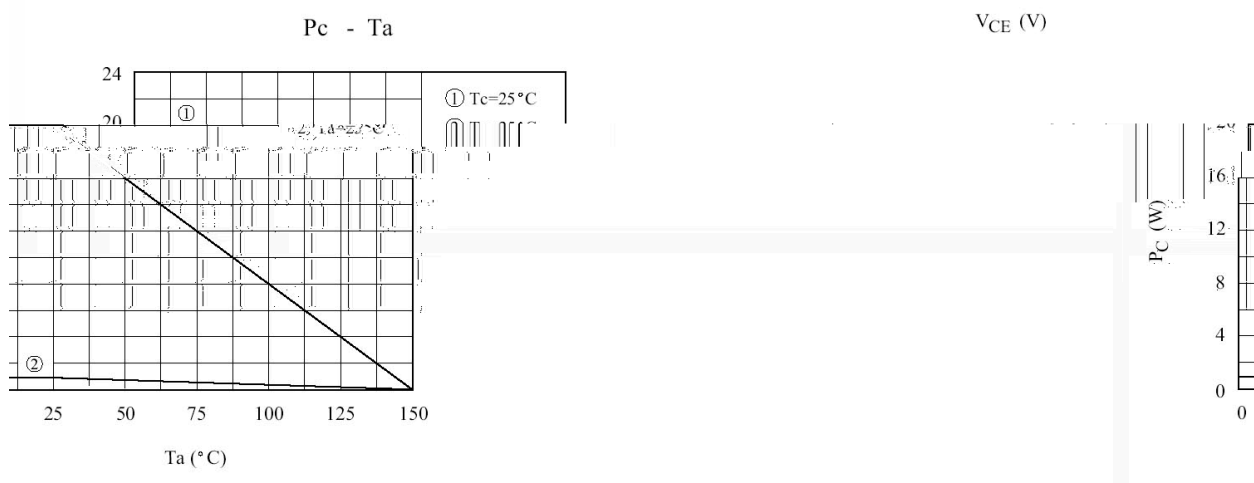
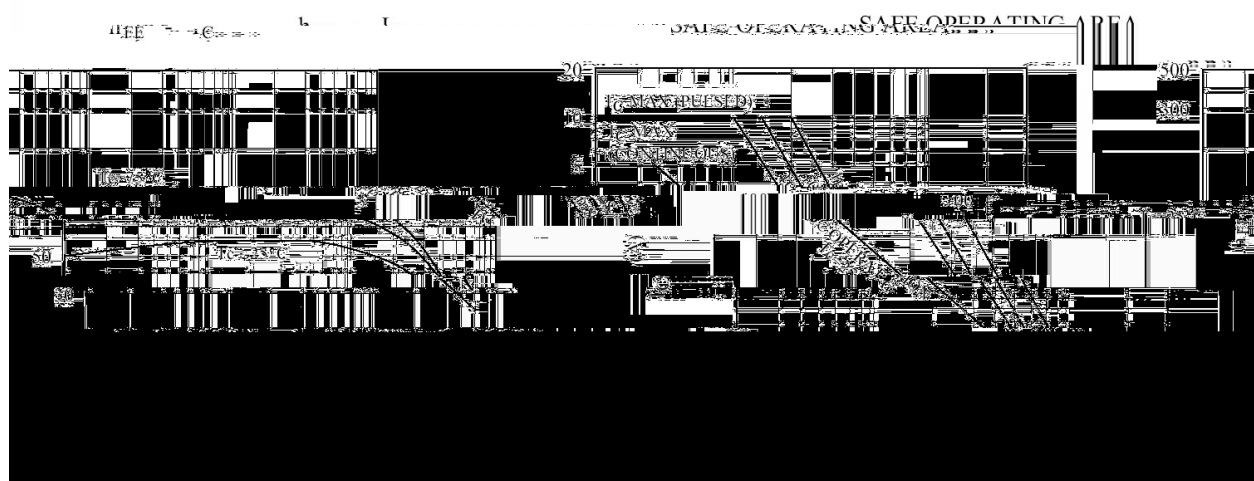
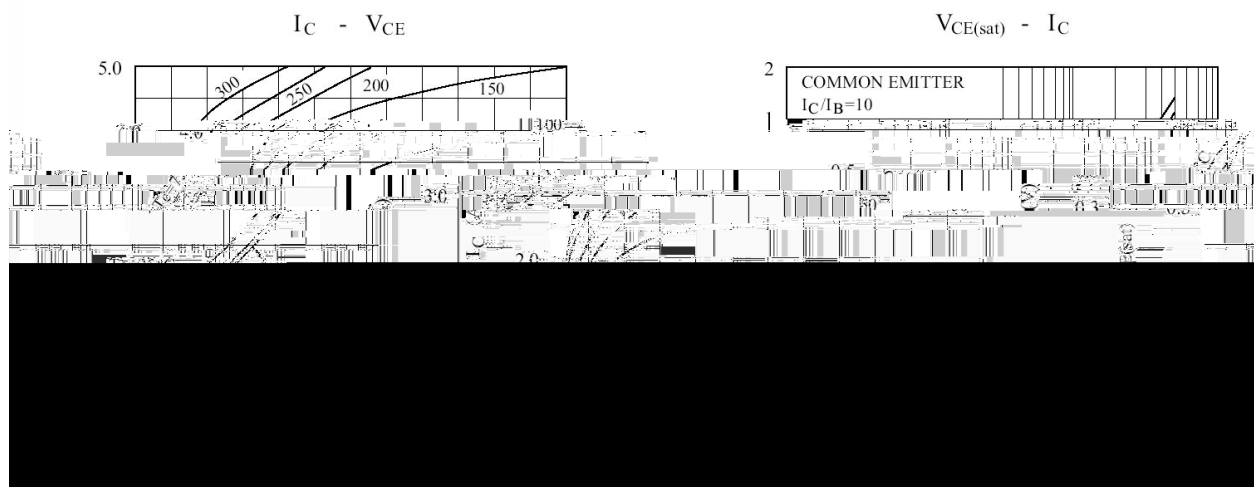
/ Absolute Maximum Ratings(Ta=25)

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	V
Collector Current - Continuous	I_C	5	A
Base Current - Continuous	I_B	0.5	A
Collector Power Dissipation	P_C	20	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

/ Electrical Characteristics(Ta=25)

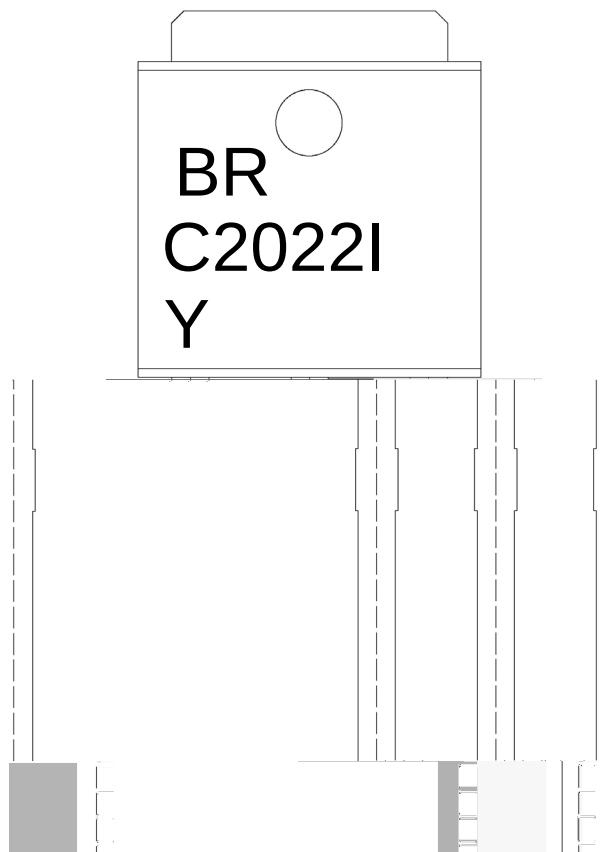
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=50mA$ $I_B=0$	100			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=100V$ $I_E=0$			100	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5V$ $I_C=0$			1	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5V$ $I_C=1A$	70		240	
	$h_{FE(2)}$	$V_{CE}=5V$ $I_C=4A$	20			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4A$ $I_B=0.4A$			2	V
Base to Emitter Voltage	V_{BE}	$V_{CE}=5V$ $I_C=1A$			1.5	V
Transition Frequency	f_T	$V_{CE}=5V$ $I_C=1A$		30		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1MHz$		40		pF

/ Electrical Characteristic Curve



Technical drawing of a mechanical part with dimensions A, A1, B, B1, C, and C1. The drawing shows a cross-section of a component with a central hole and a flange. The dimensions are labeled with arrows indicating the measurement points. The background is divided into three horizontal bands: light blue at the top, yellow in the middle, and red at the bottom.

/ Marking Instructions



BR

C2022I

Y: h_{FE}

Note:

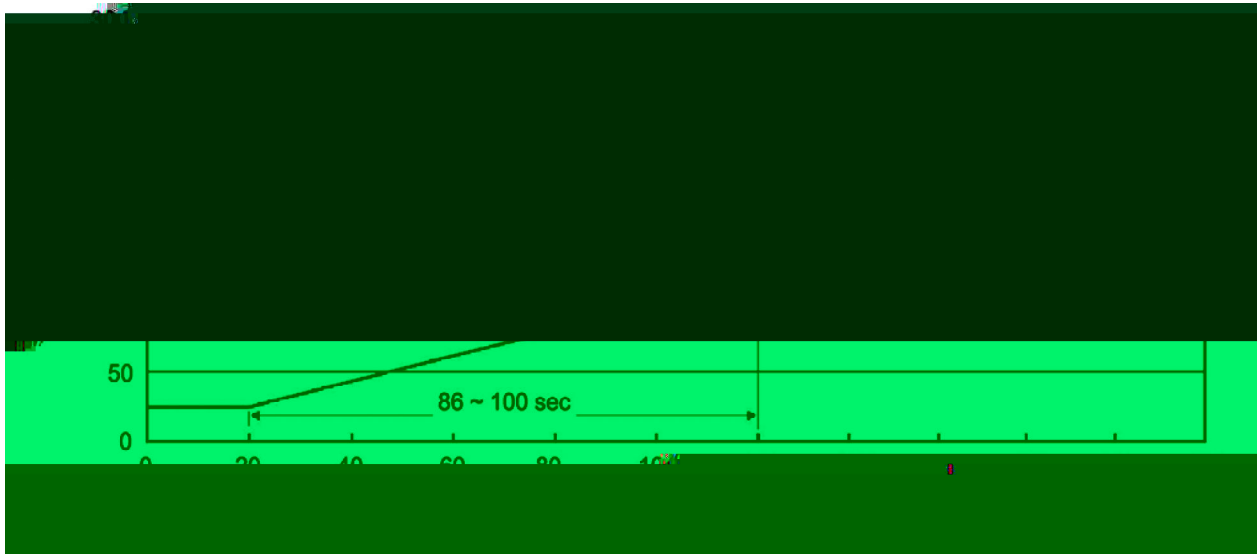
BR: Company Code

C2022I: 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 mm ³)		

/ TUBE

Package Type	Units					Dimension (unit mm ³)		

/ Notices