

/ Descriptions

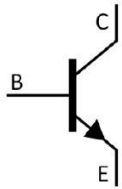
TO-220 NPN Silicon NPN transistor in a TO-220 Plastic Package.

/ Features

High speed switching, high SOA.

/ Applications

High voltage switching and amplifier applications.



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

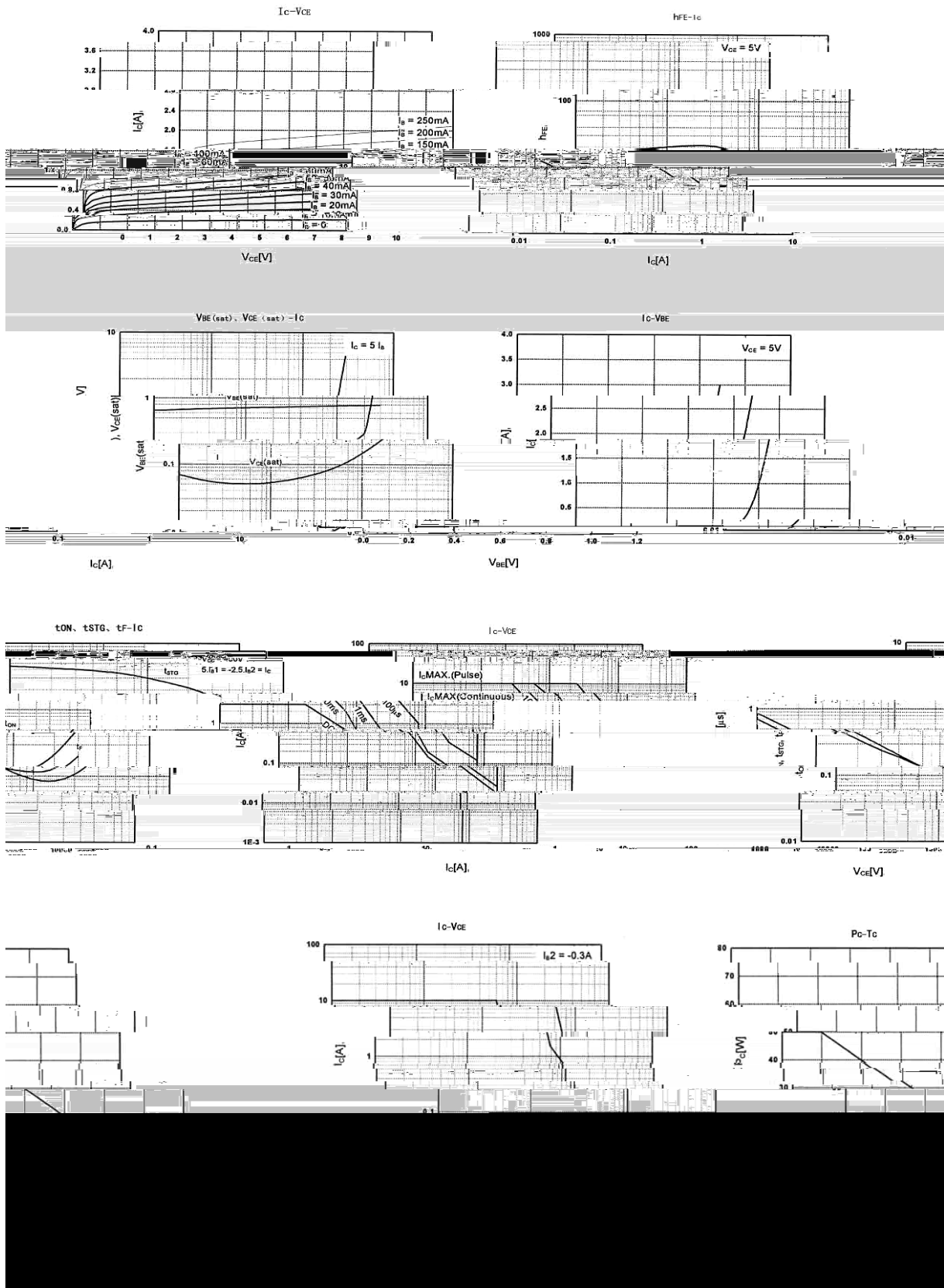
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	1100	V
Collector to Emitter Voltage	V_{CEO}	800	V
Emitter to Base Voltage	V_{EBO}	7.0	V
Collector Current - Continuous	I_C	3.0	A
Collector Current – Continuous(Pulse)	I_{CP}	10	A
Base Current - Continuous	I_B	1.5	A
Collector Power Dissipation	$P_C(T_C=25)$	50	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

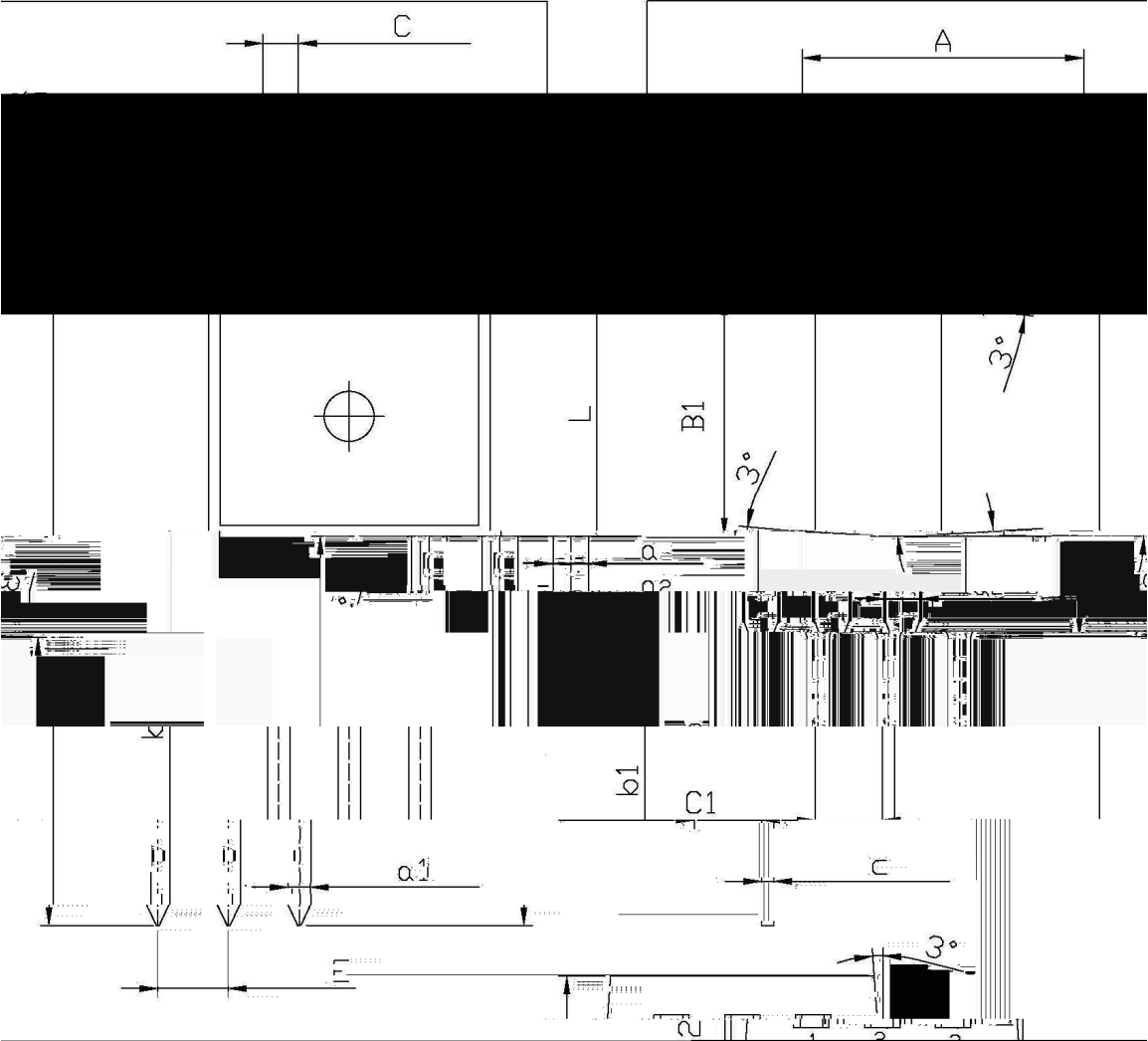
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=1.0mA$ $I_E=0$	1100			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=5.0mA$ $I_B=0$	800			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=1.0mA$ $I_C=0$	7.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=800V$ $I_E=0$			10	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			10	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5.0V$ $I_C=0.2A$	10		40	
	$h_{FE(2)}$	$V_{CE}=5.0V$ $I_C=1.0A$	8.0			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1.5A$ $I_B=0.3A$			2.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1.5A$ $I_B=0.3A$			1.5	V
Transition Frequency	f_T	$V_{CE}=10V$ $I_C=0.2A$		15		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		60		pF
Turn-On Time	T_{on}	$V_{CC}=400V$ $R_L=200$ $I_C=5I_{B1}=-2.5I_{B2}=2A$			0.5	s
Storage Time	T_{stg}				3.0	
Fall Time	T_{off}				0.3	

/ Electrical Characteristic Curve



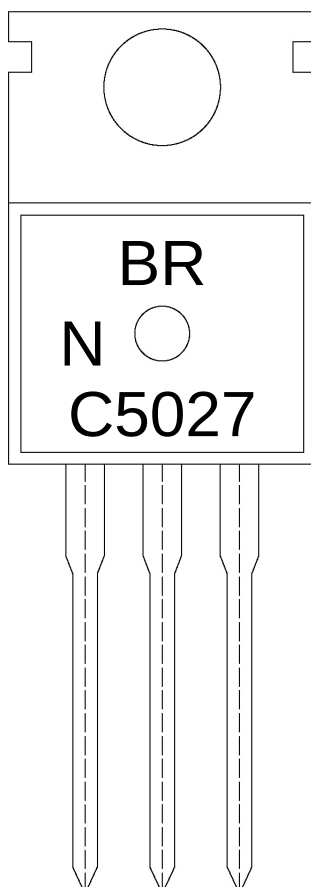
/ Package Dimensions

单位: mm T0-220



Dimensions in Millimeters			Dimensions in Millimeters		
Symbol	Min	Max	Symbol	Min	Max
A	9.8	10.2	C	1.2	1.4
B	3.56	3.64	B1	6.3	6.7
C1	9.0	9.4	a	15.7	16.1
a1	10.0	10.4	b1	12.0	12.4
a	1.32	1.36	E	2.74	2.78
b	2.74	2.78	Q2	0.2	0.25
E	1.45	1.49			

/ Marking Instructions



BR

C5027

N: h_{FE}

Note:

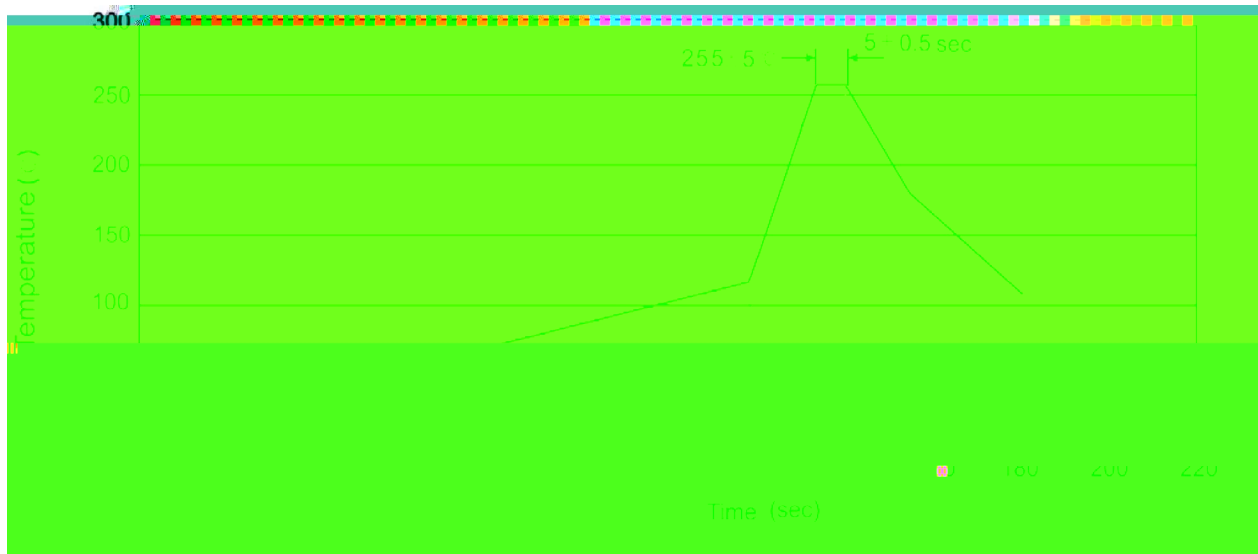
BR: Company Code

C5027: Product Type.

N: 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					Dimension 包装尺寸 (unit: mm ³)		
	只 袋	袋 盒	只 盒	盒 箱	只 箱	袋	盒	箱

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只 套管	套管 盒	只 盒	盒 箱	只 箱	套管	盒	箱

/ Notices