

/ Descriptions

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

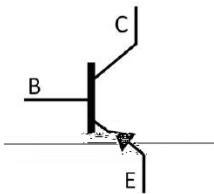
/ Features

 , 2SC2654
Large current capacity with small package, low collector saturation voltage, pair with 2SC2654.

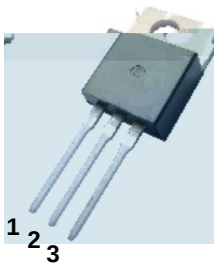
/ Applications

For low-frequency power amplifiers and mid-speed switching.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	M	L	K	J
h_{FE} Range	40 80	60 120	100 200	160 320

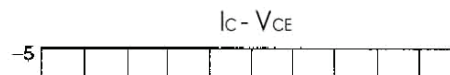
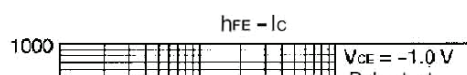
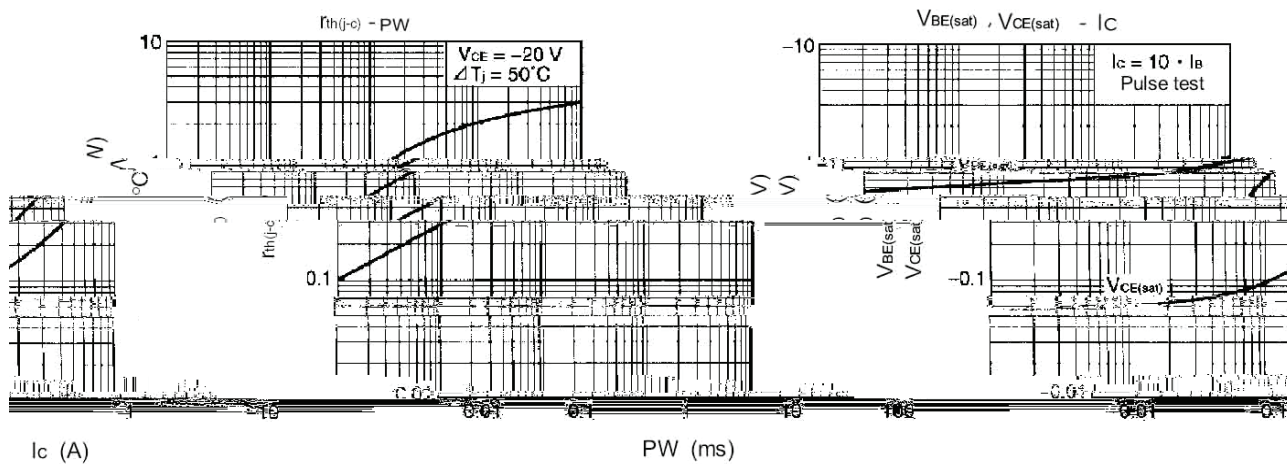
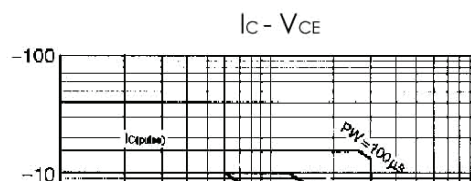
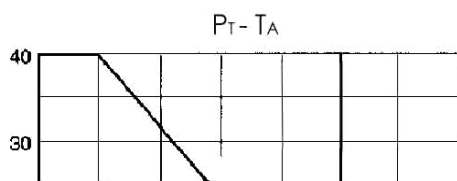
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-40	V
Emitter to Base Voltage	V_{EBO}	-7.0	V
Collector Current - Continuous	I_C	-7.0	A
Collector Current – Continuous(Pulse)	I_{CP}	-15	A
Base Current - Continuous	I_B	-3.5	A
Collector Power Dissipation	$P_C(T_C=25)$	40	W
	P_C	1.5	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

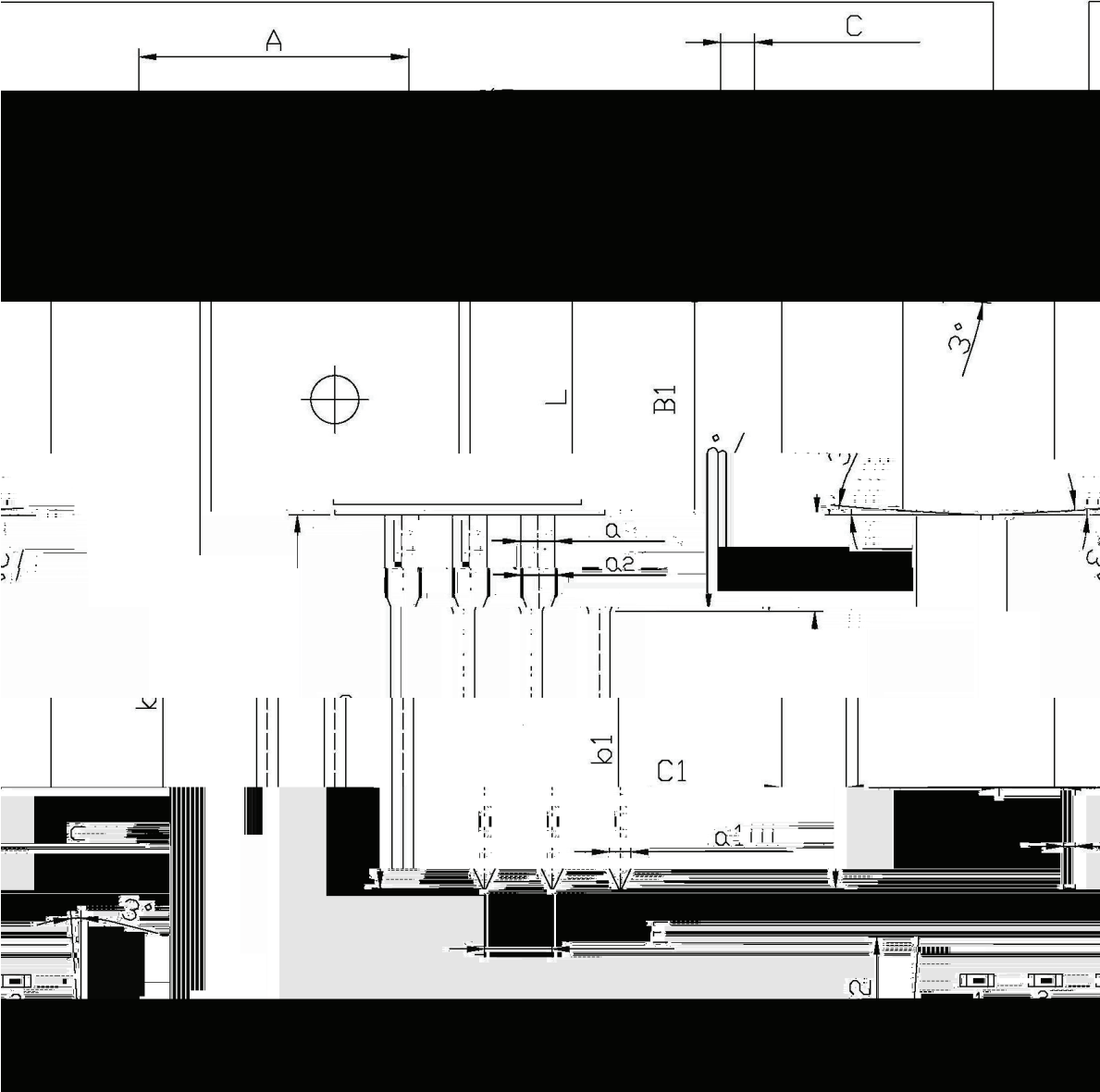
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-40V$ $I_E=0$			-10	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-5.0V$ $I_C=0$			-10	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-1.0V$ $I_C=-3.0A$	40		320	
	$h_{FE(2)}$	$V_{CE}=-1.0V$ $I_C=-5.0A$	20			
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=-3.0A$ $I_B=-0.1A$			-0.3	V
	$V_{CE(sat)(2)}$	$I_C=-5.0A$ $I_B=-0.5A$			-0.6	V
Base to Emitter Saturation Voltage	$V_{BE(sat)(1)}$	$I_C=-3.0A$ $I_B=-0.1A$			-1.5	V
	$V_{BE(sat)(2)}$	$I_C=-5.0A$ $I_B=-0.5A$			-2.0	V
Turn-On Time	t_{on}	$I_C=-5.0A$ $R_L=4.0\Omega$ $I_{B1}=-I_{B2}=-0.5A$			1.0	μs
Storage Time	t_{stg}	$V_{CC}=-20V$ $PW=50\mu s$			2.5	μs
Fall Time	t_f	duty cycle 2%			1.0	μs

/ Electrical Characteristic Curve



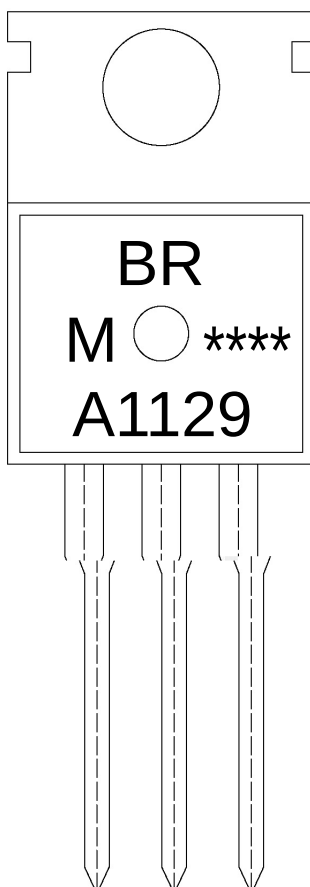
/ Package Dimensions

单位: mm



Symbol	Dimensions in millimeters		Symbol	Dimensions in millimeters	
	Min	Max		Min	Max
A	9.8	10.2	C	1.2	1.4
B1	3.56	3.64	C1	6.3	6.7
9.4			15.7	16.1	9.0

/ Marking Instructions



BR

A1129

M: h_{FE}

Note:

BR: Company Code

A1129: Product Type.

M: 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)		
	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-220/F	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: mm ³)		
	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-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices