

/ Descriptions

TO-92 PNP Silicon PNP transistor in a TO-92 Plastic Package.

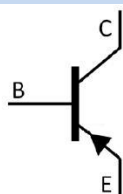
/ Features

High breakdown voltage, high current, low saturation voltage.

/ Applications

Low frequency power amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ hFE Classifications & Marking

h _{FE} Classifications Symbol	D	E	F
h _{FE} Range	60~120	100~200	160~320

/ Absolute Maximum Ratings(Ta=25)

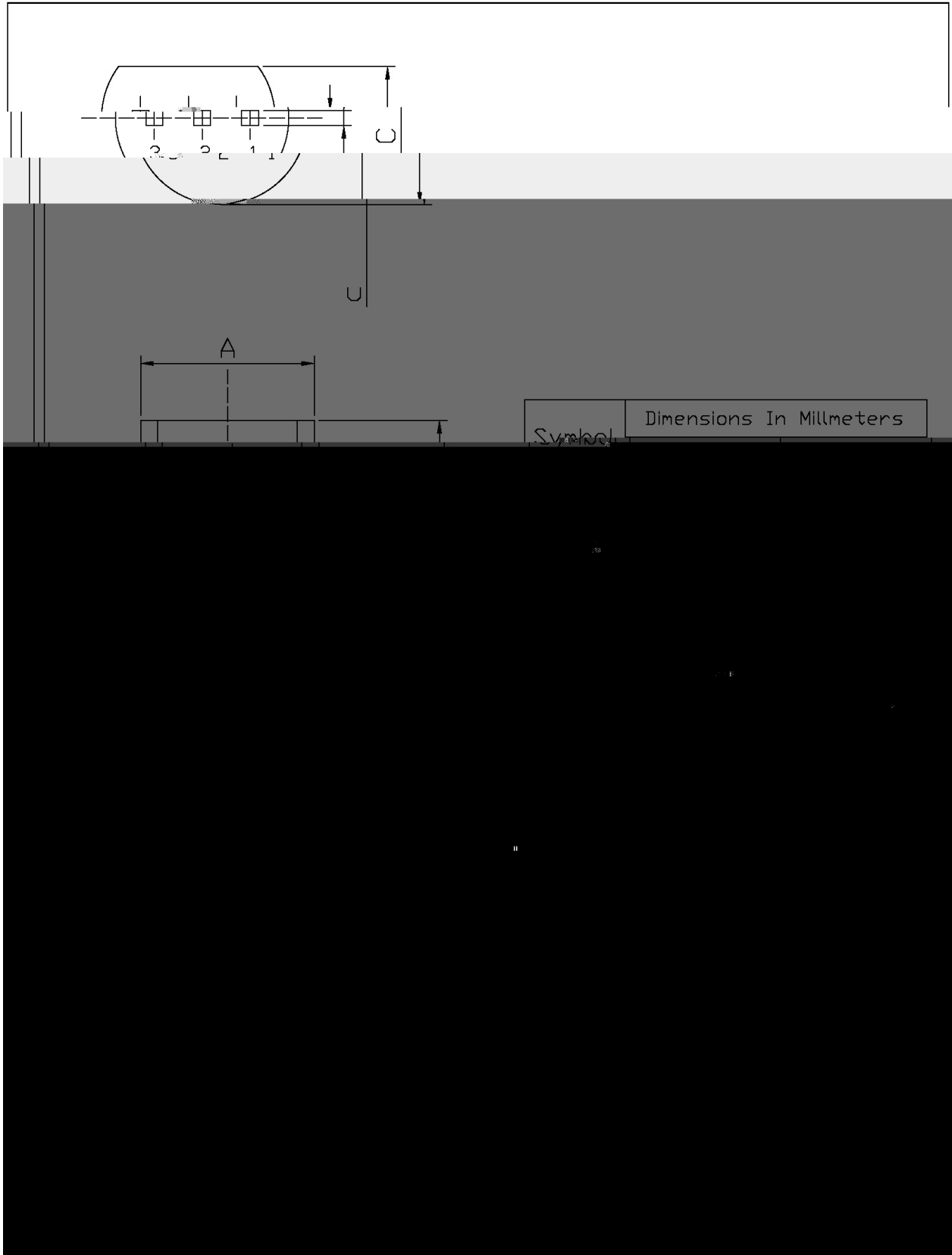
Parameter	Symbol		Rating	Unit
Collector to Base Voltage	V_{CBO}	2SA984	-60	V
		2SA984K	-100	
Collector to Emitter Voltage	V_{CEO}	2SA984	-50	V
		2SA984K	-80	
Emitter to Base Voltage	V_{EBO}		-5.0	V
Collector Current - Continuous	I_C		-500	mA
Collector Current – Continuous(Pulse)	I_{CP}		-800	mA
Collector Power Dissipation	P_C		600	mW
Junction Temperature	T_j		150	
Storage Temperature Range	T_{stg}		-55 150	

/ Electrical Characteristics(Ta=25)

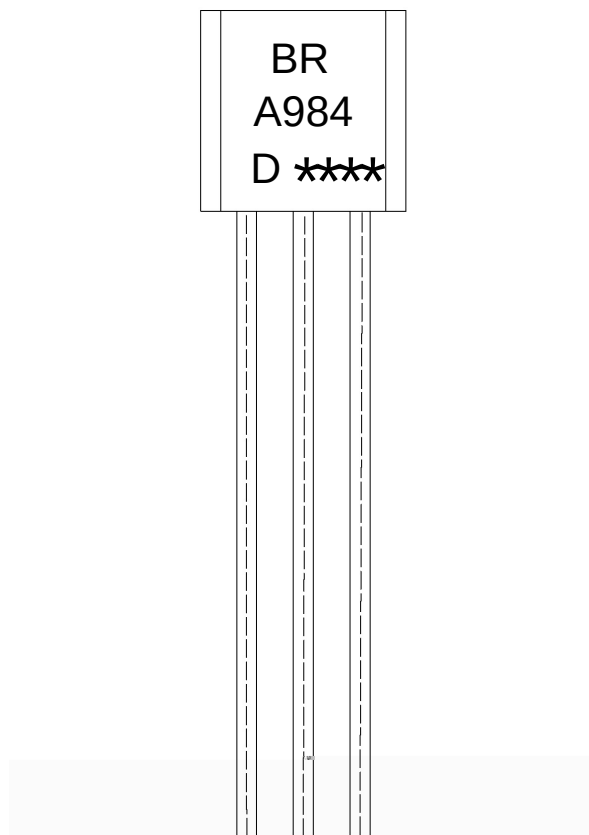
Parameter	Symbol		Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	2SA984	$I_C=-10\mu A \quad I_E=0$	-60			V
		2SA984K		-100			
Collector to Emitter Breakdown Voltage	V_{CEO}	2SA984	$I_C=-1.0mA \quad R_{BE}=\infty$	-50			V
		2SA984K		-80			
Emitter to Base Breakdown Voltage	V_{EBO}		$I_E=-10\mu A \quad I_C=0$	-5.0			V
Collector Cut-Off Current	I_{CBO}		$V_{CB}=-40V \quad I_E=0$			-1.0	μA
Emitter Cutoff Current	I_{EBO}		$V_{EB}=-4.0V \quad I_C=0$			-1.0	μA
DC Current Gain	$h_{FE(1)}$		$V_{CE}=-5.0V \quad I_C=-50mA$	60		320	
	$h_{FE(2)}$		$V_{CE}=-5.0V \quad I_C=-400mA$	35			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$		$I_C=-400mA \quad I_B=-40mA$		-0.25	-0.6	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$		$I_C=-400mA \quad I_B=-40mA$		-0.9	-1.2	V
Transition Frequency	f_T		$V_{CE}=-10V \quad I_C=-10mA$		120		MHz
Collector Output Capacitance	C_{ob}		$V_{CB}=-10V \quad f=1.0MHz$		9.0		pF

T0-92

Unit: mm



/ Marking Instructions



BR:

A984

D: h_{FE}

Note:

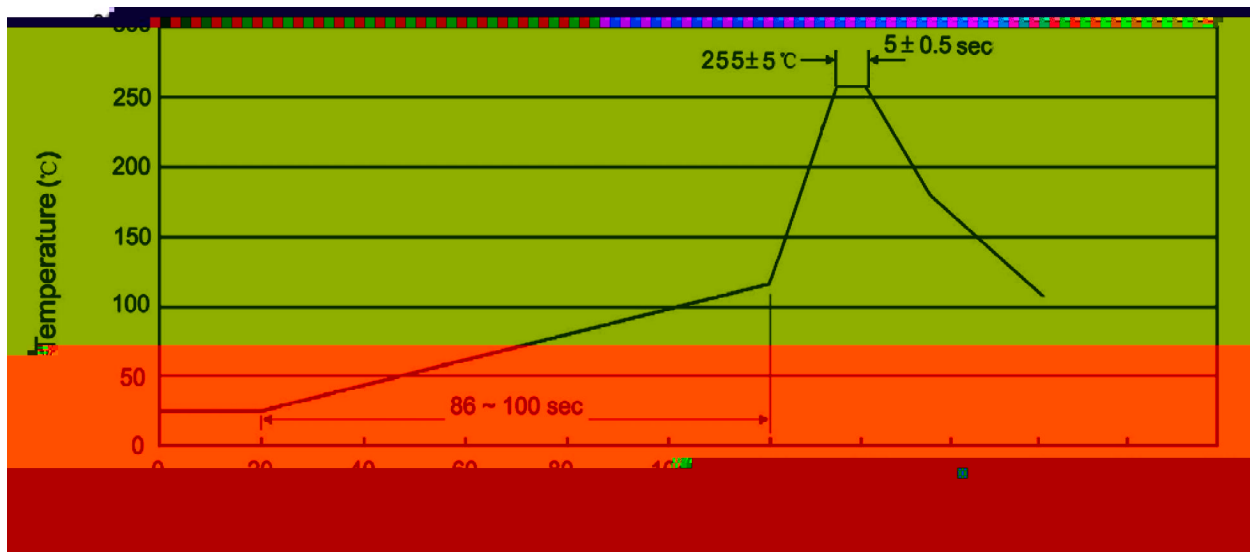
BR: Company Code.

A984: Product Type.

D: 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: mm3)		
	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-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

/ AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/tape 只/纸带	Tape/Inner Box 纸带/盒	Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
TO-92	3,000	1	120	10	30,000	328×230×42	小箱 480×346×235, 大箱 547×407×268

/ Notices