

/ Descriptions

TO-92

PNP

Silicon PNP transistor in a TO-92 Plastic Package.

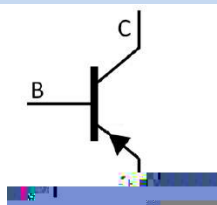
/ Features

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	

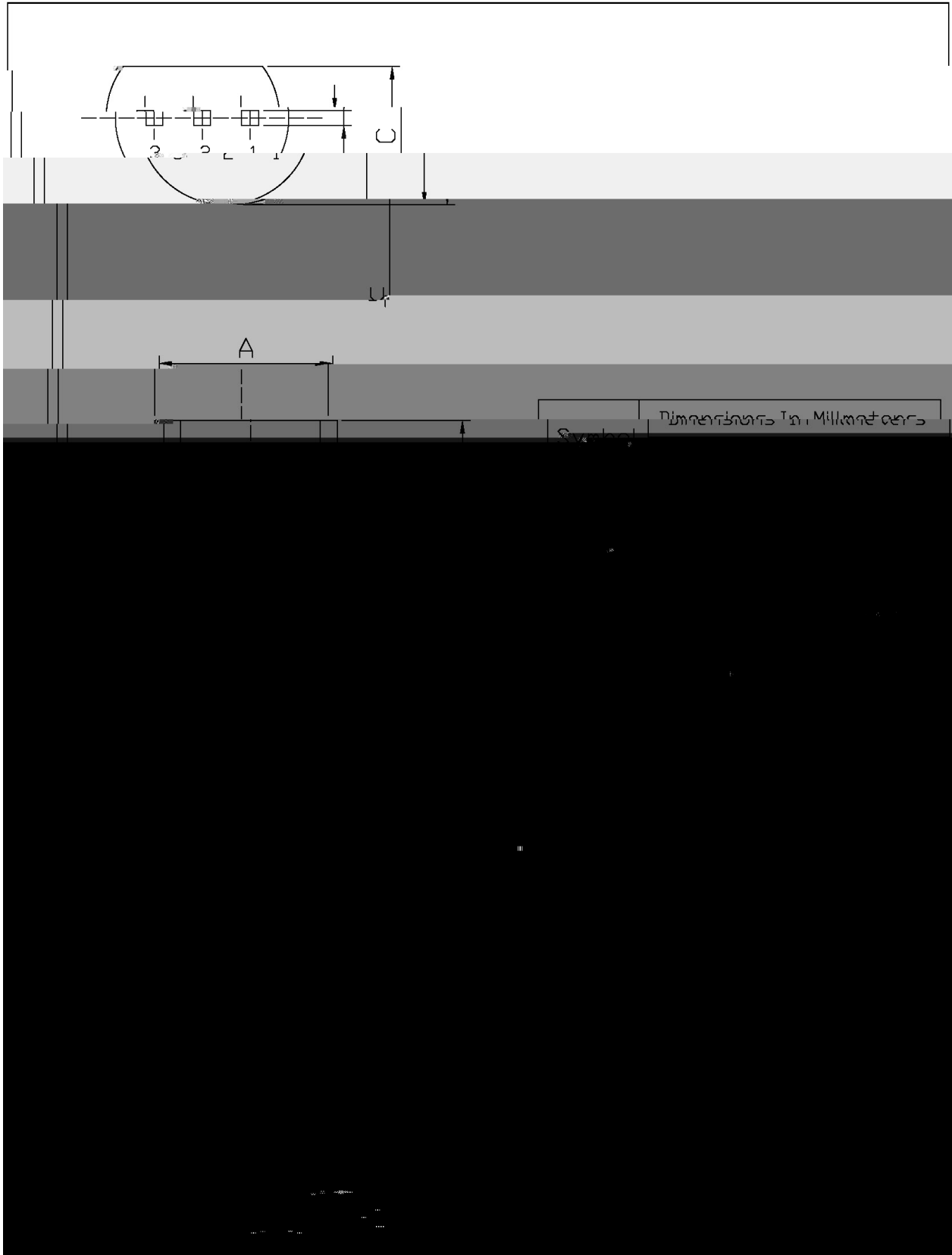
/ Electrical Characteristics(Ta=25)

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

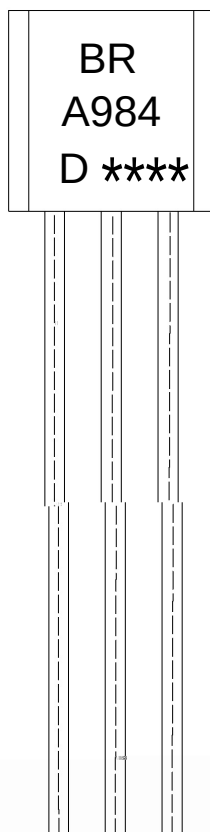
/ Package Dimensions

TO-92

Unit: mm



/ Marking Instructions



BR:

A984

D: h_{FE}

Note:

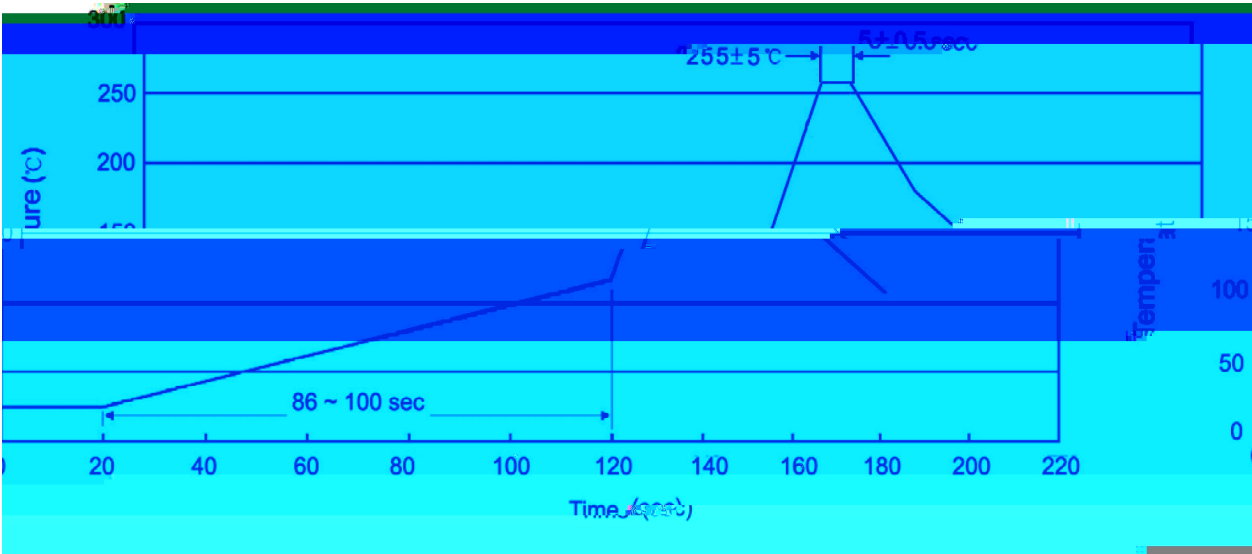
BR: Company Code.

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

dBW18q4y-