

2SA1048

Rev.E Mar.-2016

/ Descriptions

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

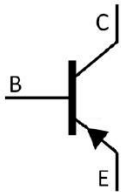
/ Features

Small package, high voltage, high h_{FE} , excellent h_{FE} linearity, low noise, Complementary pair with 2SC2458.

/ Applications

Audio frequency amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	O	Y	GR
h_{FE} Range	70~140	120~240	200~400

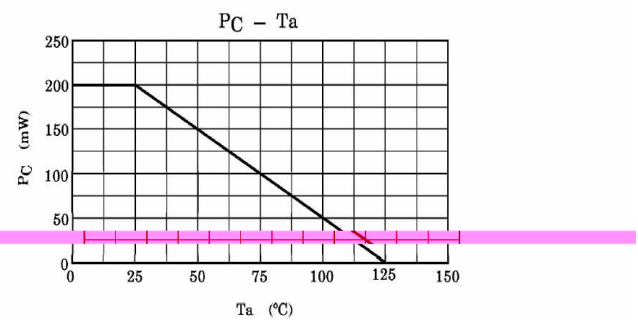
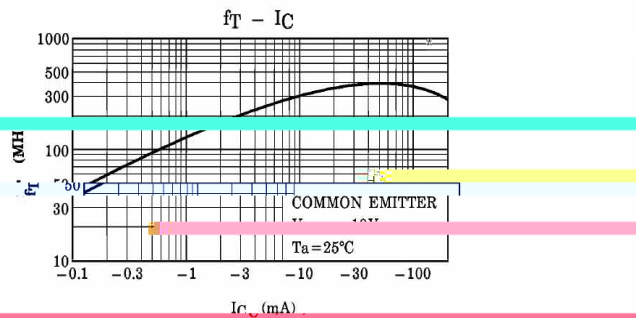
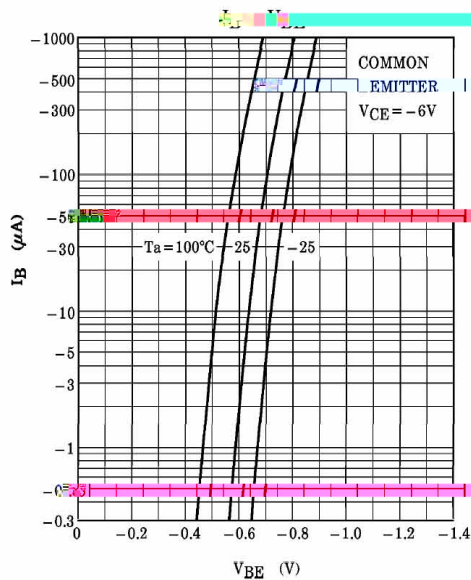
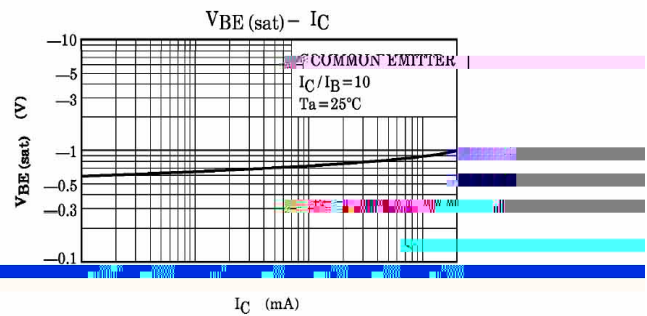
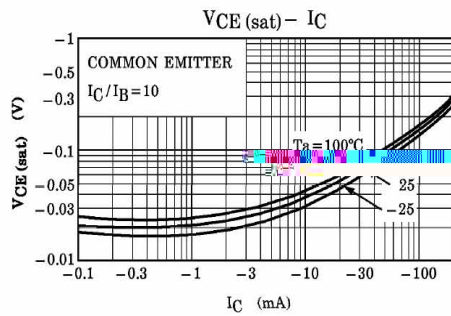
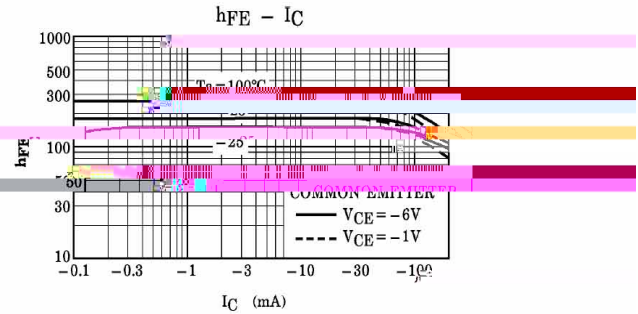
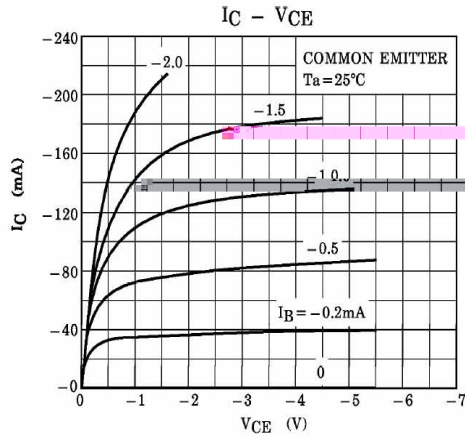
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-50	V
Collector to Emitter Voltage	V_{CEO}	-50	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-150	mA
Emitter Current - Continuous	I_E	150	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	
Storage Temperature Range	T_{sag}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-50V$ $I_E=0$			-0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-5.0V$ $I_C=0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=-6.0V$ $I_C=-2.0mA$	70		400	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100mA$ $I_B=-10mA$		-0.1	-0.3	V
Transition Frequency	f_T	$V_{CE}=-10V$ $I_C=-1.0mA$	80			MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-10V$ $f=1.0MHz$ $I_E=0$		4.0	7.0	pF
Noise Figure	NF	$V_{CE}=-6.0V$ $f=1.0KHz$ $I_C=-0.1mA$ $R_g=10K\Omega$		1.0	10	dB

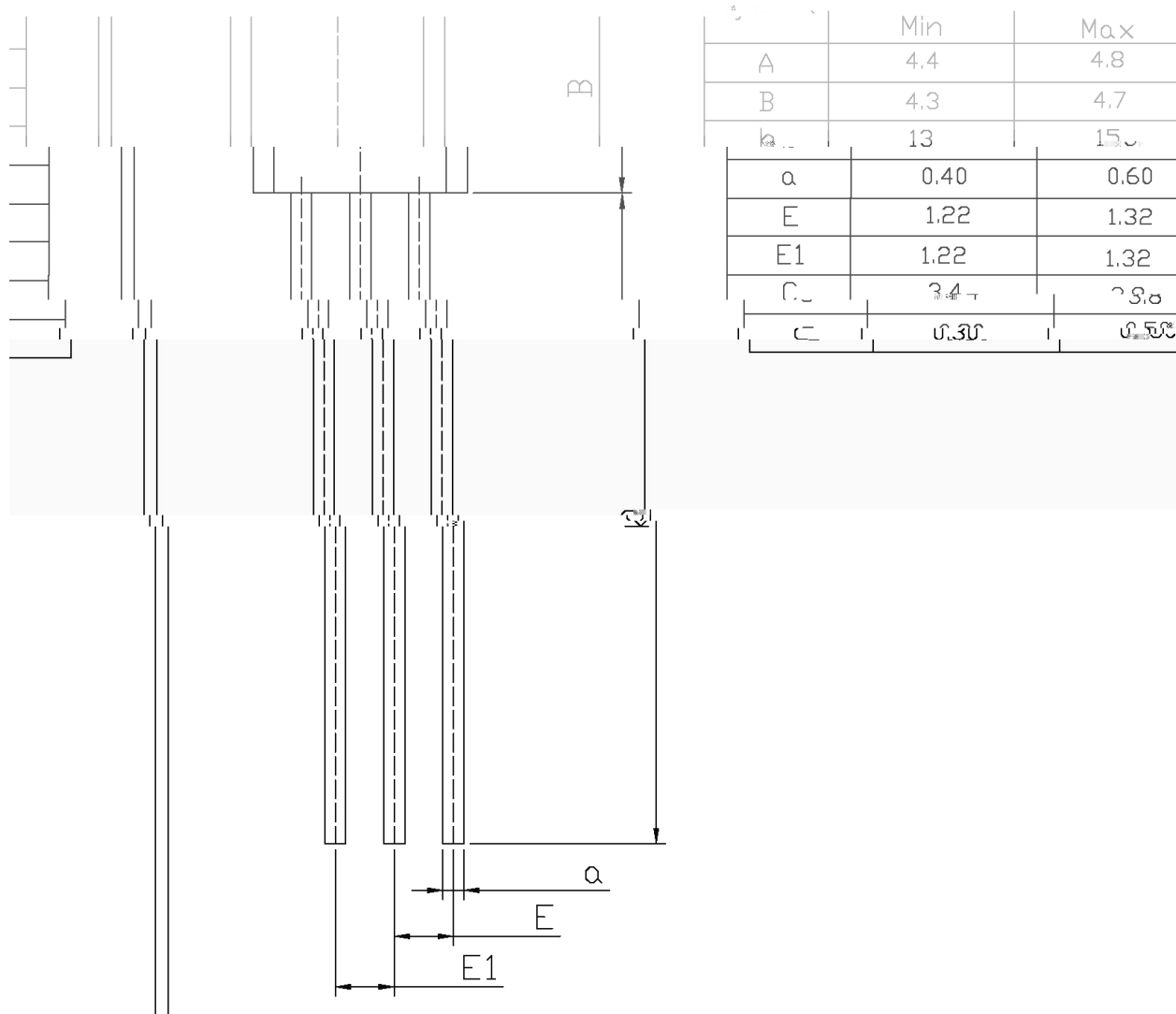
/ Electrical Characteristic Curve



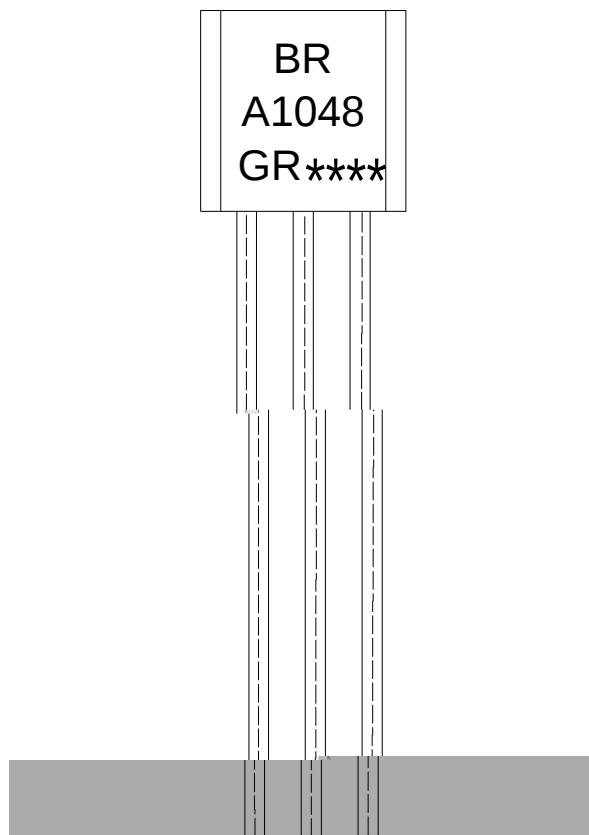
/ Package Dimensions

T0-92

Unit: mm



/ Marking Instructions



BR:

A1048

GR: h_{FE}

Note:

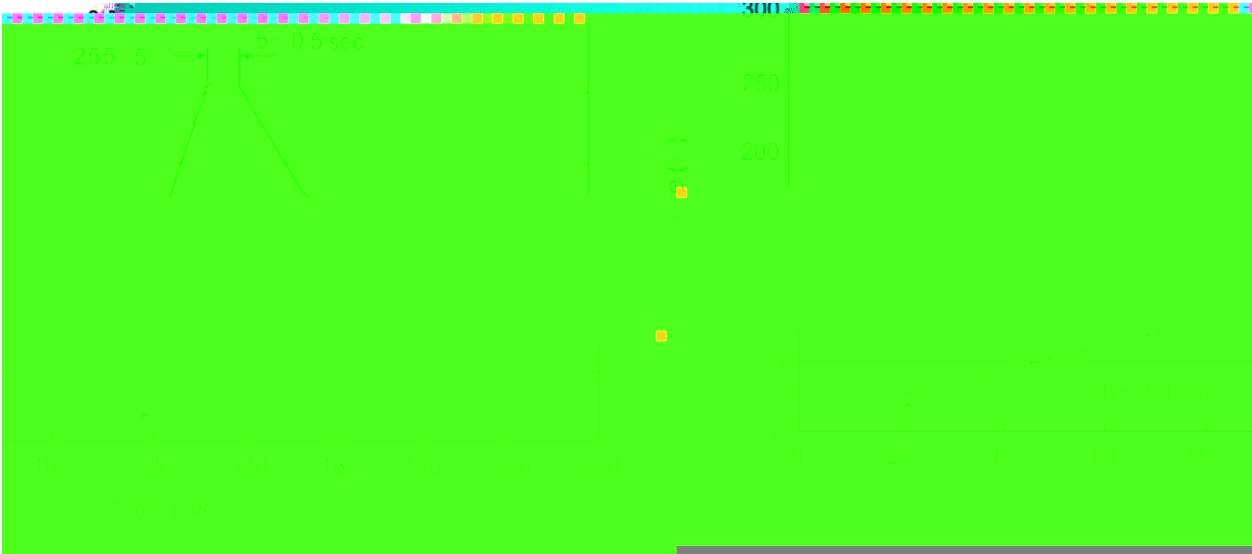
BR: Company Code.

A1048: Product Type.

GR: 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