

/ Descriptions

TO-252 NPN Silicon NPN transistor in a TO-252 Plastic Package.

/ Features

$V_{CE(sat)}$, h_{FE} AEC-Q101

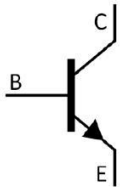
Low saturation voltage, excellent h_{FE} linearity and high h_{FE} , Qualified to AEC-Q101 Standards for High Reliability, HF Product.

/ Applications

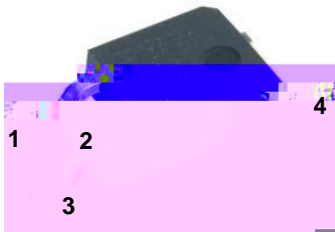
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Output stage of 3 watts audio amplifier, voltage regulator, DC-DC converter and relay driver, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2,4 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	R	Q	P	E
h_{FE} Range	60~120	100~200	160~320	200~400

BR2SD882DQ

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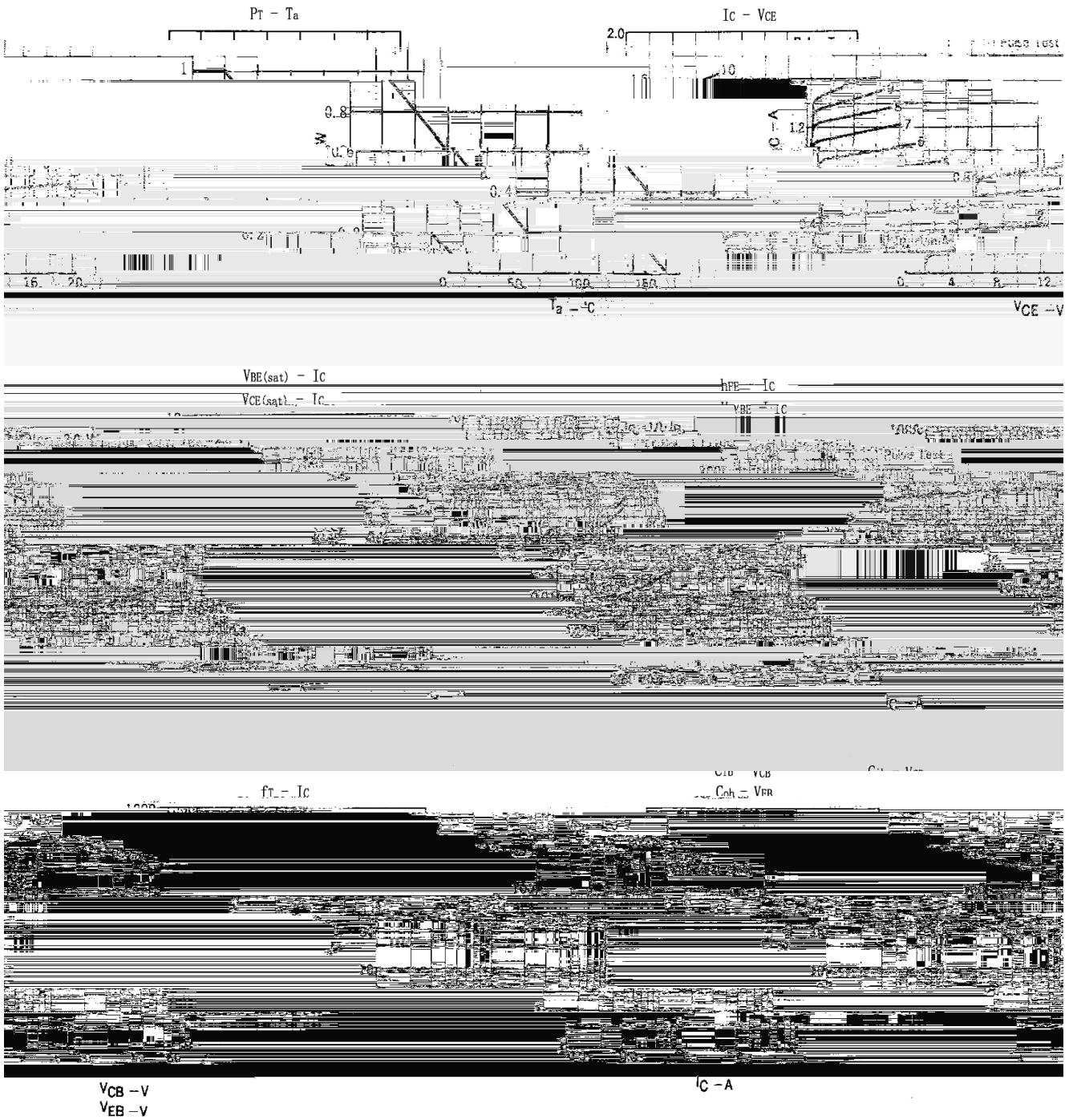


DATA SHEET

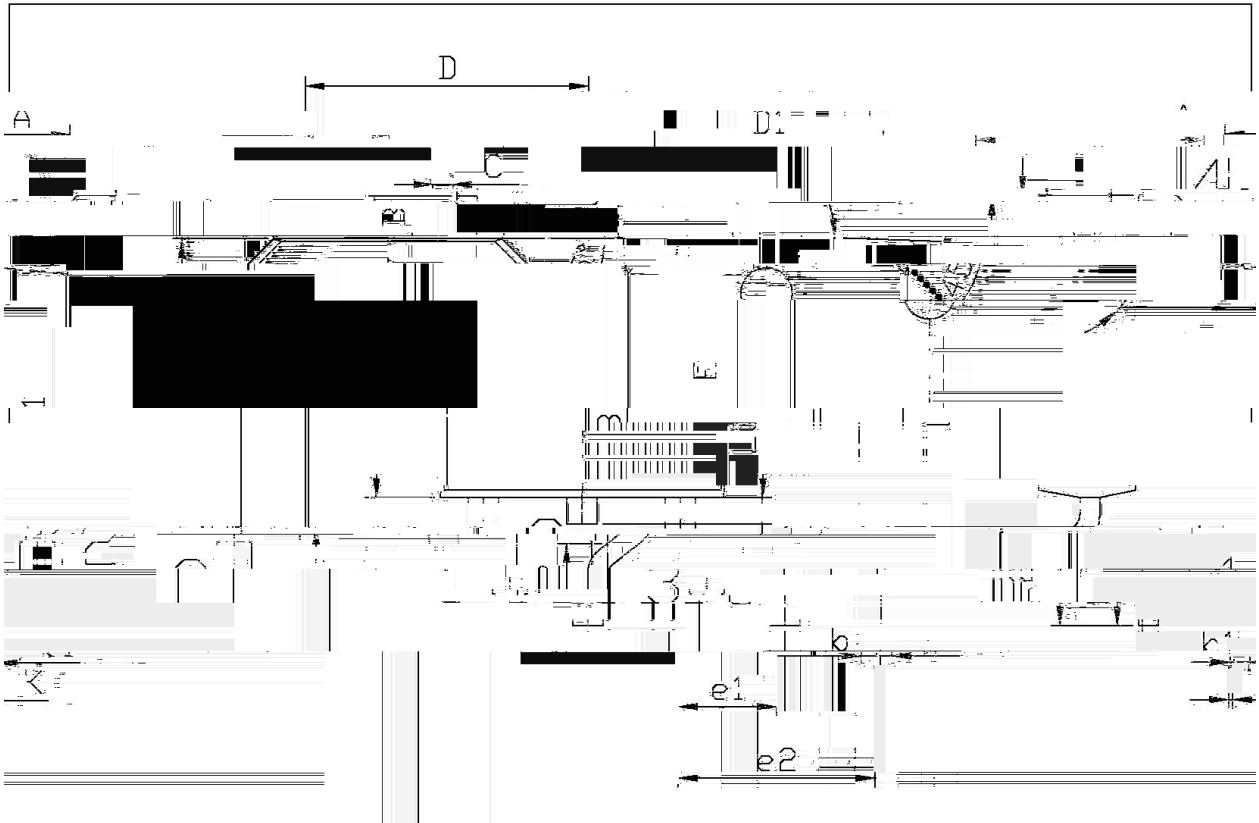
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	3.0	A
Collector Power Dissipation	P_C	1.0	W
	$P_{C(T_C=25^\circ C)}$	10	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$ $I_E=0$			1.0	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=3.0V$ $I_C=0$			1.0	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=1.0A$	60	160	400	
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=20mA$	30	150		
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$					V

/ Electrical Characteristic Curve



/ Package Dimensions

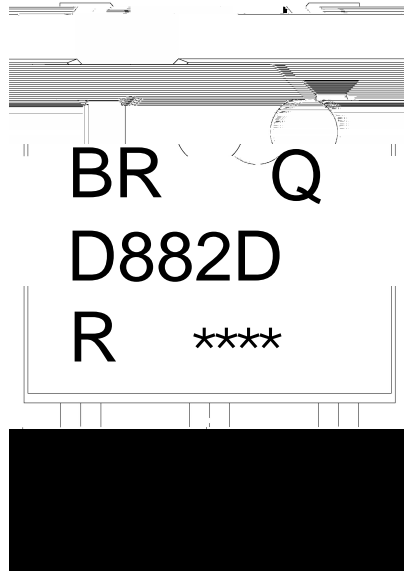


单位: mm

Dimensions in millimeters		Symbol	Dimensions in millimeters		Symbol
Min	Max		Min	Max	
4.73	6.05	b	0.70	0.90	e2
10.76	12.00	e1	0.55	0.70	L2
		c	0.45	0.55	L3
		D	6.45	6.75	K
		D1	5.10	5.50	

TQ-252

/ Marking Instructions



BR

Q

D882D

R: h

Note:

BR: Company Code

Q: Automobile halogen-free product Code

D882D: Product Type

R: h_{FE} Classifications Symbol

****: Lot No. Code, code change with Lot No



() / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

- 1 150 200 60 120sec; 1.Preheating:150~200 , Time:60~120sec.
- 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

260±5 10±1 sec. Temp.:260±5℃ Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
TO-252	2,500	2	5,000	6	30,000	13" x16	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box