

/ Revised record

E	2016-5				
F	2020-4-27	1			
A	2022-3-29	all	BR Q 4R Q AEC-Q101 , Q 245±5 5±0.5sec 255±5 5± 0.5sec		

/ Descriptions

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

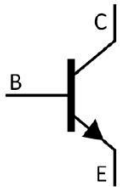
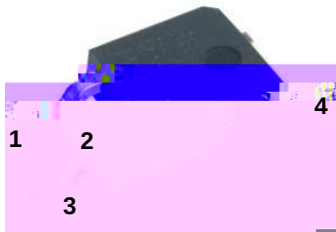
/ Features

$V_{CE(sat)}$, 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

3 , ,
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

Rev.A Mar.-2022



DATA SHEET

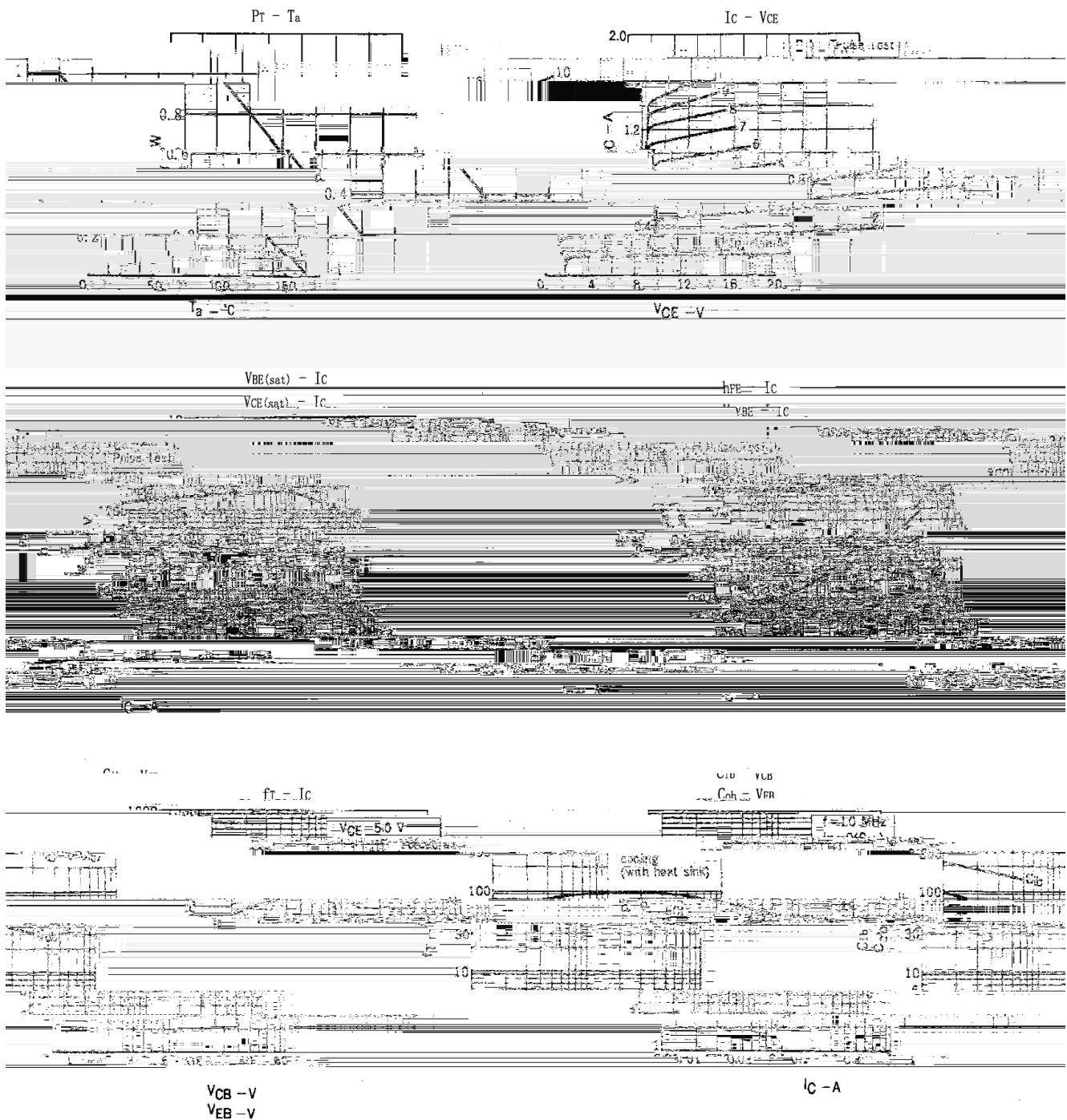
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	3.0	A
Collector Power Dissipation	P_C	1.0	W
	$P_{C(TC=25^{\circ}C)}$	10	W
Junction Temperature	T_J	150	$^{\circ}C$
Storage 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	$V_{CE(sat)}$	$I_C=2.0A$				V

=2.0A

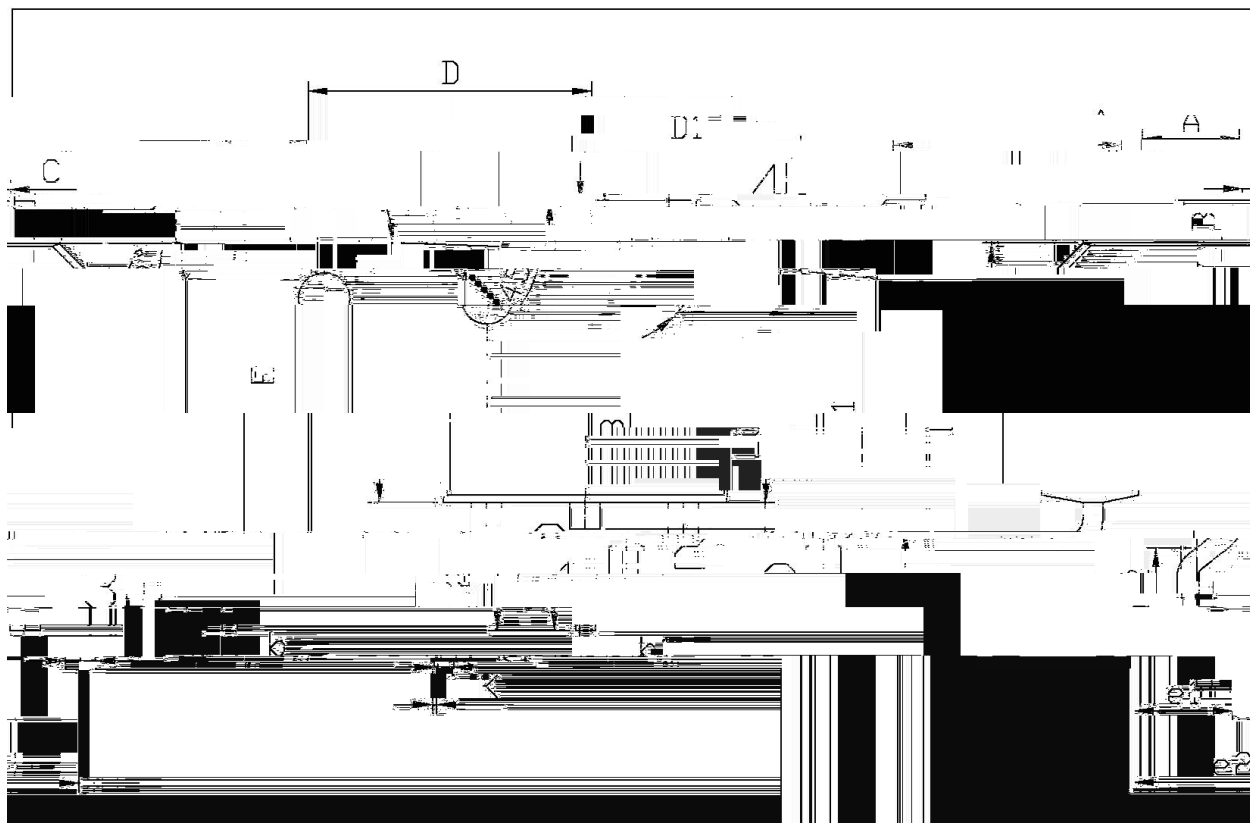


/ Electrical Characteristic Curve





/ Package Dimensions

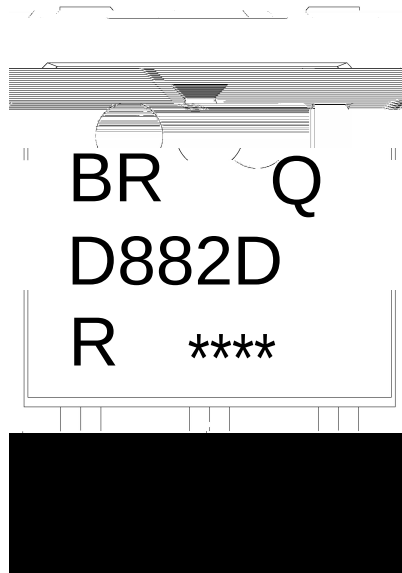


单位: mm

Dimensions in Millimeters				Dimensions in Millimeters			
Symbol		Min	Max	Symbol		Min	Max
A		2.20	2.40	D		6.45	6.75
b		0.70	0.90	D1		5.10	5.50
c		0.45	0.55	E		0.45	0.55
D		6.45	6.75	F		0.45	0.55
D1		5.10	5.50	G		0.45	0.55
E		0.45	0.55	H		0.45	0.55
F		0.45	0.55	I		0.45	0.55
G		0.45	0.55	J		0.45	0.55
H		0.45	0.55	K		0.45	0.55
I		0.45	0.55	L		0.45	0.55
J		0.45	0.55	M		0.45	0.55
K		0.45	0.55	N		0.45	0.55
L		0.45	0.55	O		0.45	0.55
M		0.45	0.55	P		0.45	0.55
N		0.45	0.55	Q		0.45	0.55
O		0.45	0.55	R		0.45	0.55
P		0.45	0.55	S		0.45	0.55
Q		0.45	0.55	T		0.45	0.55
R		0.45	0.55	U		0.45	0.55
S		0.45	0.55	V		0.45	0.55
T		0.45	0.55	W		0.45	0.55
U		0.45	0.55	X		0.45	0.55
V		0.45	0.55	Y		0.45	0.55
W		0.45	0.55	Z		0.45	0.55
X		0.45	0.55				
Y		0.45	0.55				
Z		0.45	0.55				

T0-252

/ 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" ×16	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