

/ Revised record

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

/ Descriptions

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

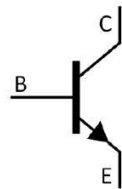
/ Features

$V_{CE(sat)}$, 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.

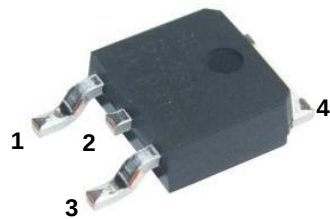
/ Applications

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



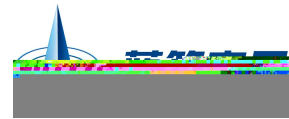
/ Pinning



PIN1 Base PIN 2,4 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

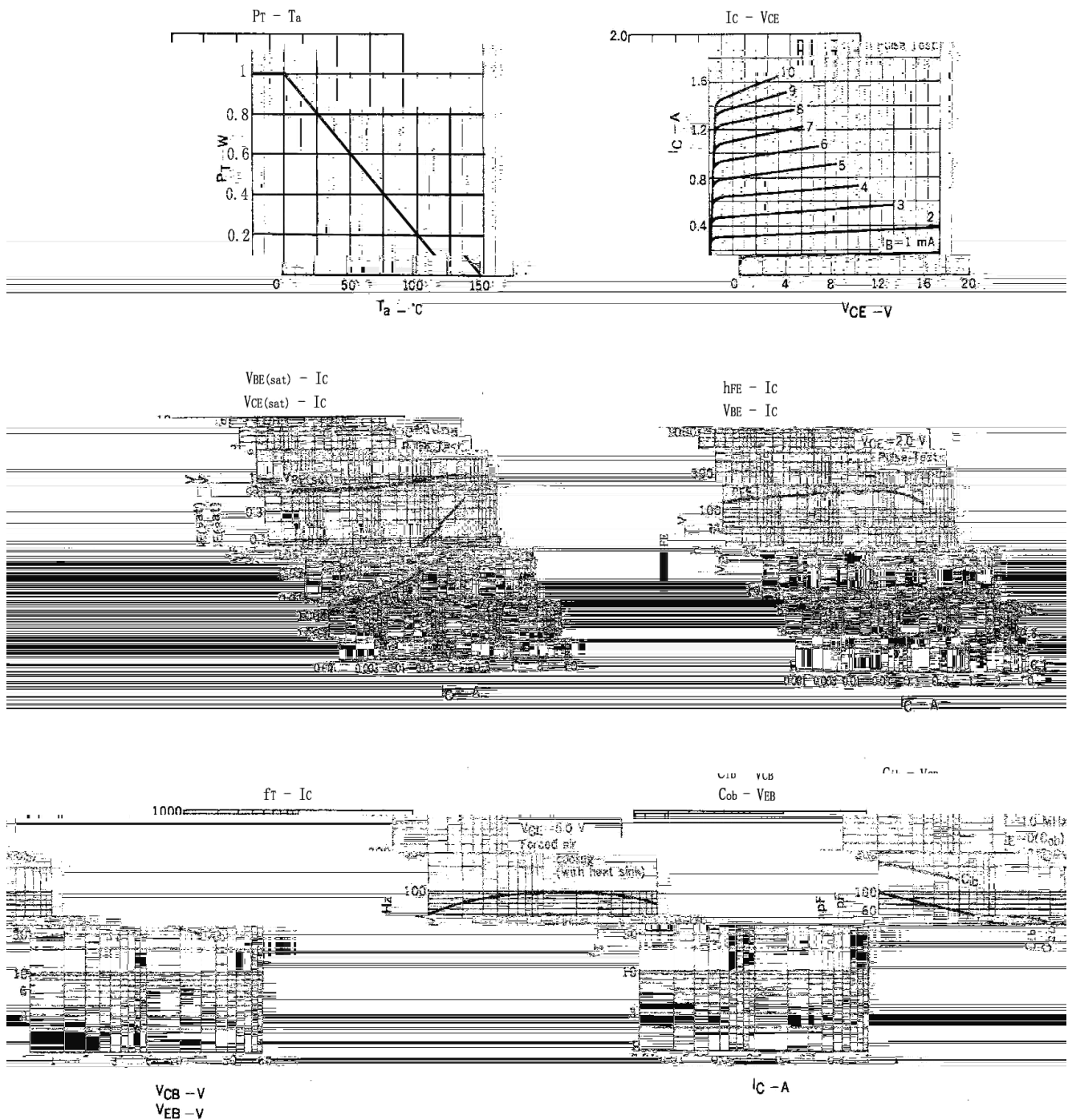
h_{FE} Classifications Symbol	R	Q	P	E
h_{FE} Range	60~120	100~200	160~320	200~400



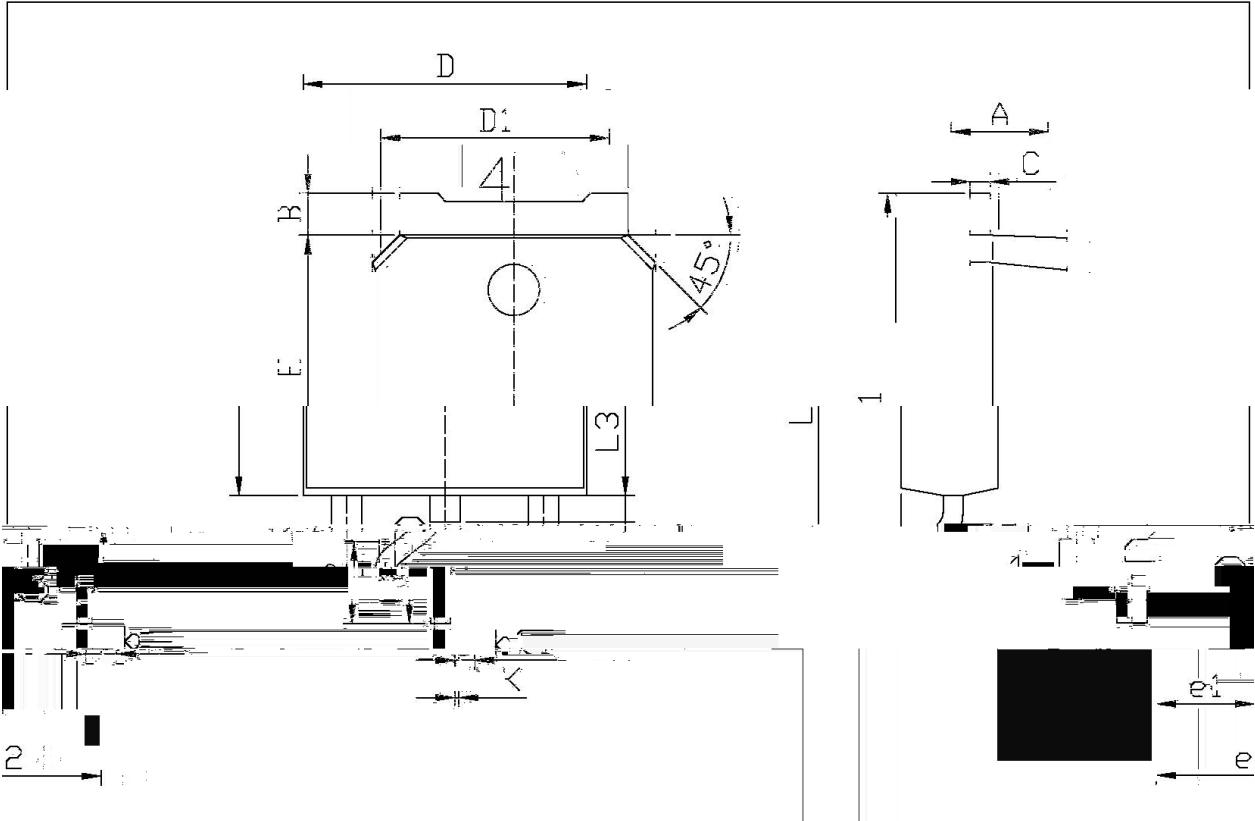
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	3.0	A
Collector Power Dissipation	P_C	1.0	W
	$P_{C(TC=25^{\circ}C)}$	10	W
Junction Temperature	T_J	150	$^{\circ}C$
Storage 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	$V_{CE(sat)}$	$I_C=2.0A$ $I_B=0.2A$		0.3	0.5	V

/ Electrical Characteristic Curve



/ Package Dimensions

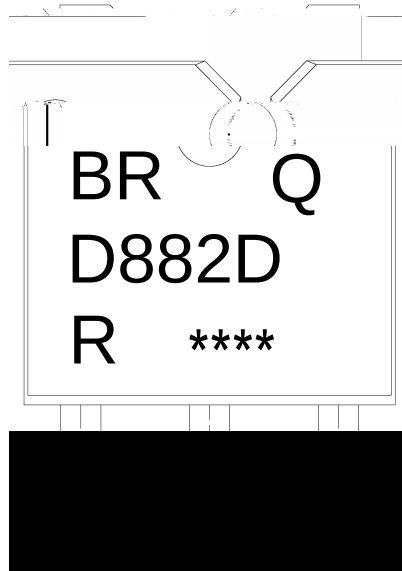


单位: mm

Dimensions in millimeters		Dimensions in millimeters		Dimensions in millimeters	
Min	Max	Symbol	Min	Max	Symbol
3.20	3.40		5.95	6.25	
0.95	1.25		2.24	2.34	
0.70	0.90		4.43	4.73	
0.45	0.55		9.85	10.35	
0.60	0.90		0.65	0.95	
0.00	0.10		6.45	6.75	
			5.10	5.50	

T0-252

/ Marking Instructions



BR

Q

D882D

R:

 h_{FE}

Note:

BR:

Company Code

Q:

Automobile halogen-free product Code

D882D:

Product Type

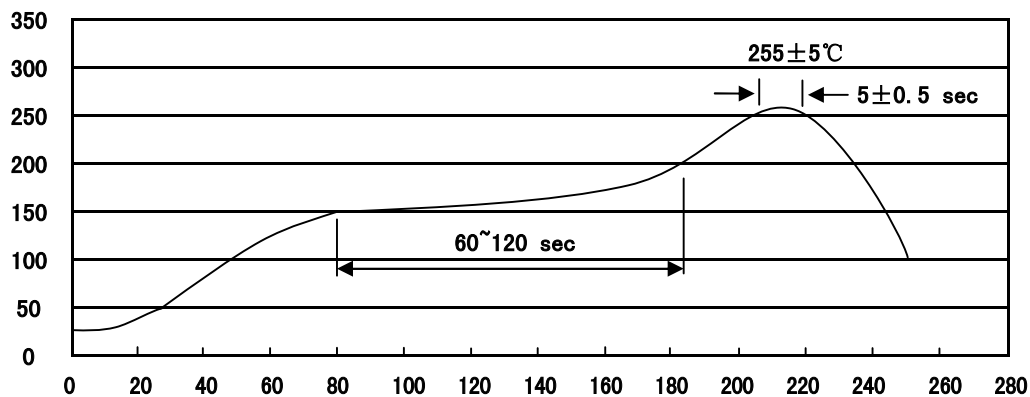
R:

 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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-252	2,500	2	5,000	6	30,000	13" ×16	360×360×50	380×335×366

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices