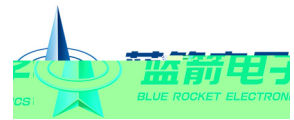


BR2SD882TQ

Rev.B Jun.-2025



DATA SHEET

SOT-89

NPN

Silicon NPN transistor in a SOT-89 Plastic Package.

$V_{CE(sat)}$, h_{FE}

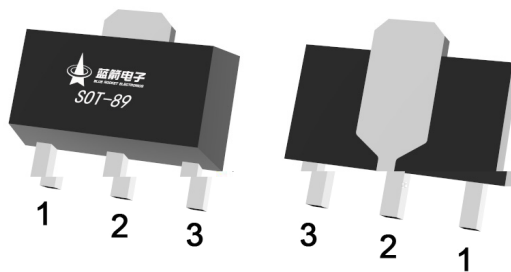
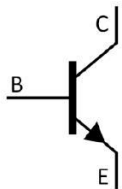
AEC-Q101

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

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

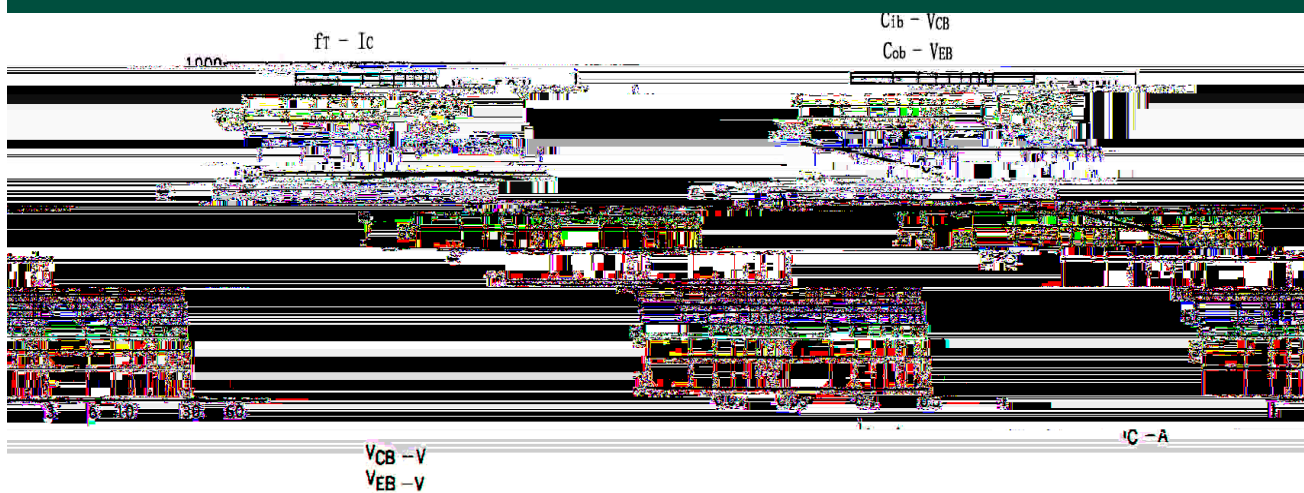
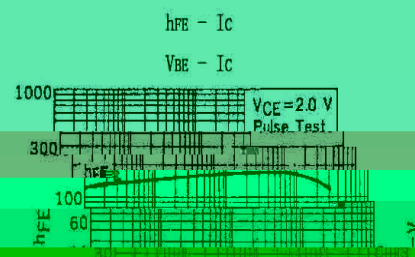
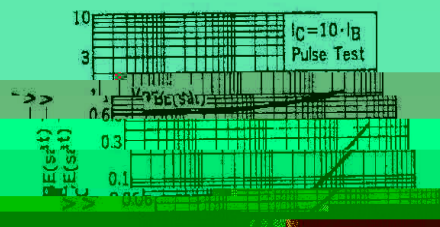
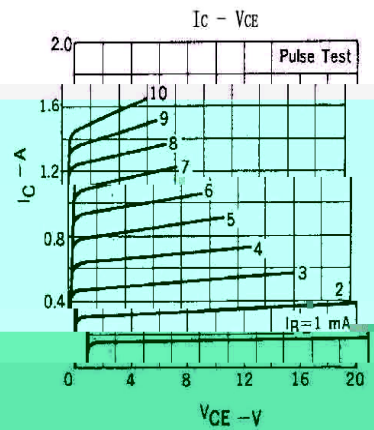
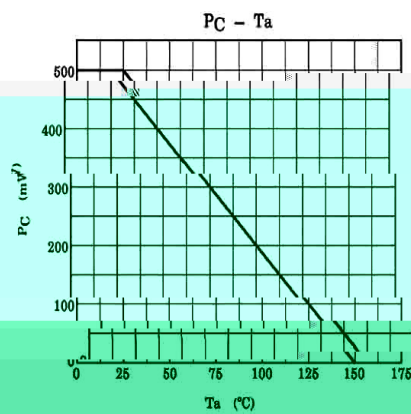


PIN1

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	500	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

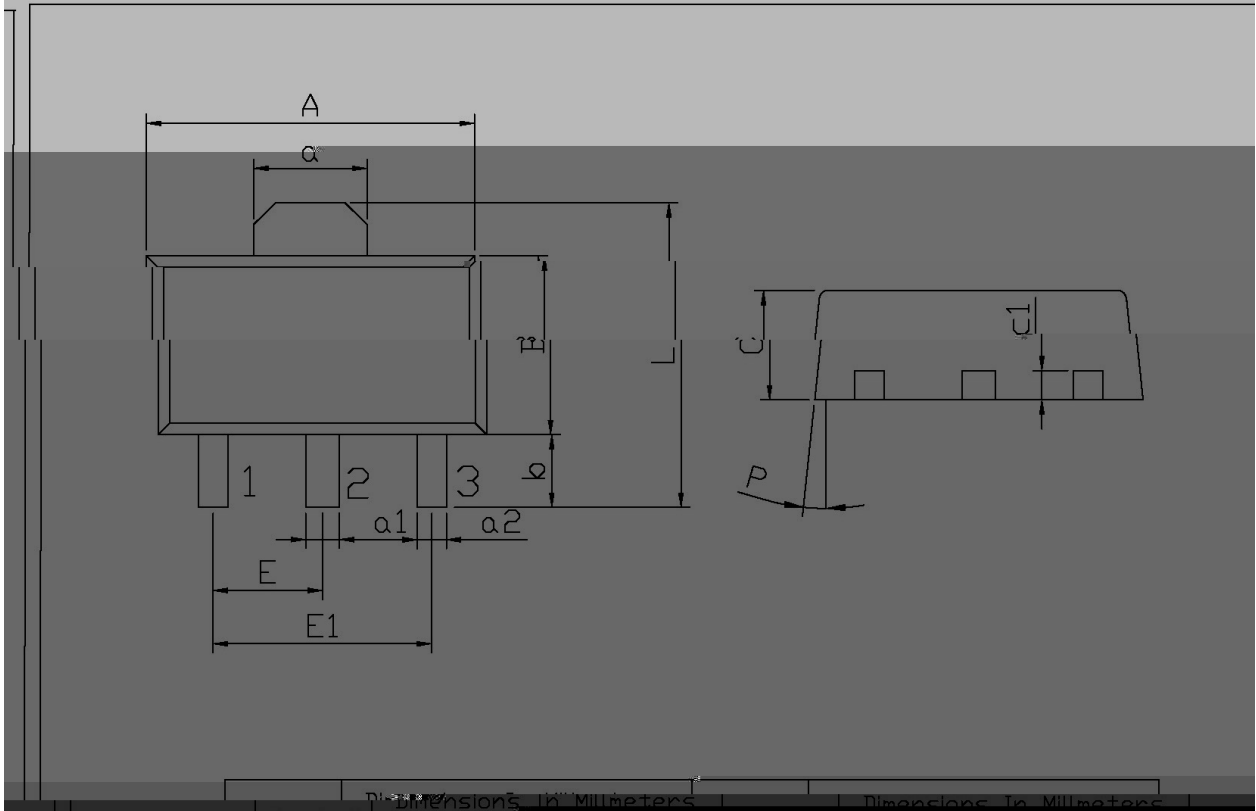
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$ $I_E=0$			1.0	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=3.0V$ $I_C=0$			1.0	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=1.0A$	60	160	400	
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=20mA$	30	150		
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0A$ $I_B=0.2A$		0.3	0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2.0A$ $I_B=0.2A$		1.0	2.0	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=0.1A$		90		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		45		pF

/ Electrical Characteristic Curve

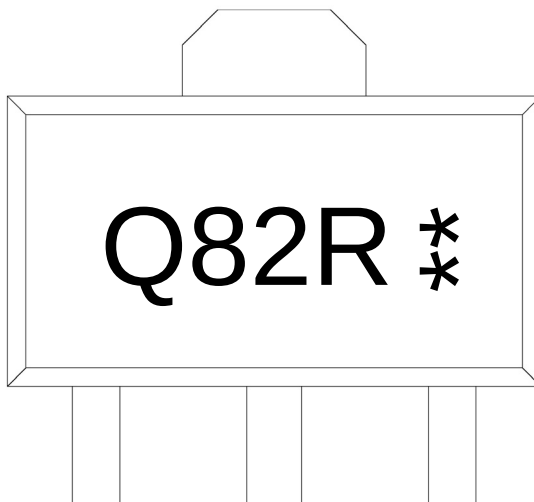


/ Package Dimensions

單位: mm



/ Marking Instructions



Q

82

R

h_{FE}

**

Note:

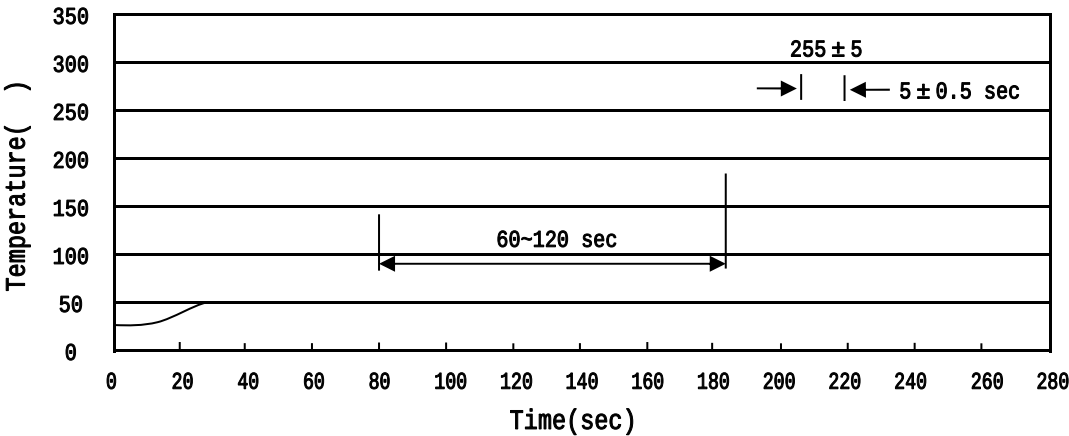
Q: Automobile halogen-free product Code

82: Product Type

R h_{FE} Classifications Symbol

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

() /



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
SOT-89	1,000	10	10,000	4	40,000	7 ×12	210×205×205	445×435×230

/ Notices