BR2SB1261Q

Rev.A Apr.-2023

DATA SHEET

/ Descriptions

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

/ Features

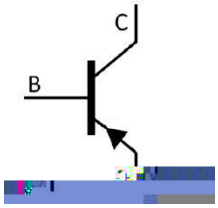
hFE AEC-Q101

Excellent hFE linearity, low $V_{CE(sat)}$, high P_C, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

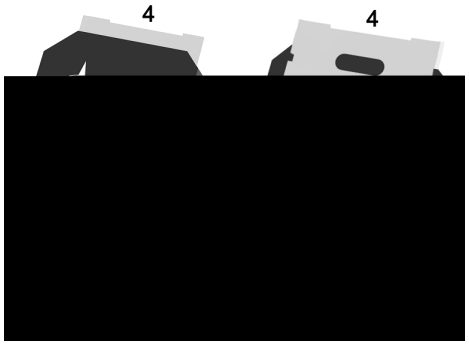
/ Applications

Audio frequency amplifier and switching, especially in hybrid integrated circuits applications, 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	M	L	K
h_{FE} Range	100 200	160 320	200 400

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-60	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-7.0	V
Collector Current - Continuous	I_C	-3.0	A
Collector Power Dissipation*	*P_C	2.0	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

* 7.5×7.5×0.7mm
*When mounted on a 7.5×7.5×0.7mm ceramic board.

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=-0.1mA I_E=0	-60			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=-1.0mA I_B=0	-60			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=-0.1mA I_C=0	-7.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=-60V I_E=0			-10	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=-7.0V I_C=0			-10	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=-2.0V I_C=-600mA	100		400	
	$h_{FE(2)}$	V_{CE}=-2.0V I_C=-200mA	60			
	$h_{FE(3)}$	V_{CE}=-2.0V I_C=-2.0A	50			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-1.5A I_B=-150mA			-0.3	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=-1.5A I_B=-150mA			-1.2	V
Transition Frequency	f_T	V_{CE}=-5.0V I_C=-1.5A		50		MHz
Collector output capacitance	C_{ob}	V_{CB}a n c 7 . f 4 5 . 1 2 8 6 0 5 . 3 9 T c (C B) T 2 . T c				

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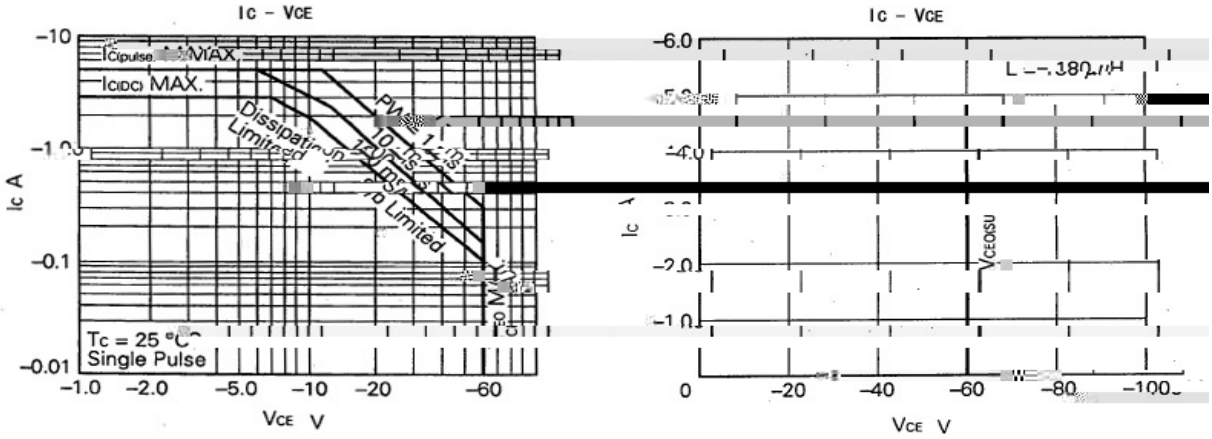
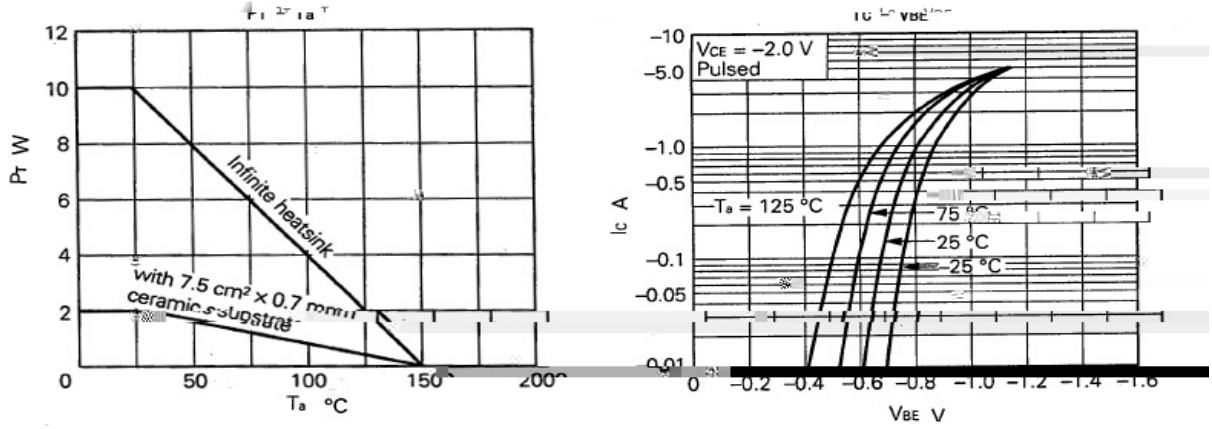
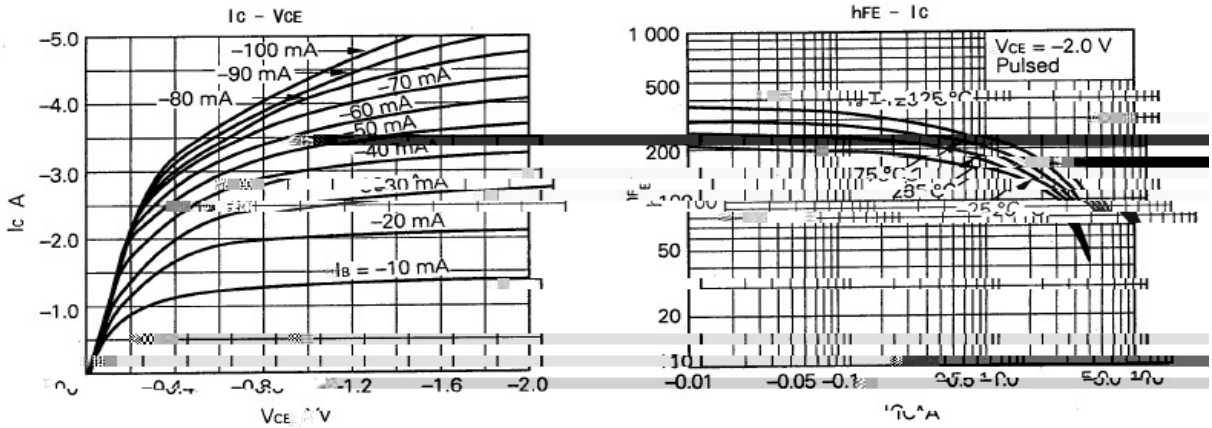

Ic – VCE
ICpulse MAX.
ICDC MAX.
Dissipation Limited
PW = 1 ms
10 ms
100 ms
VCEO Limited
Tc = 25 °C
Single Pulse
Ic A
VCE V
Ic – VCE
L = 180 μH
VCEO(SU)
Ic A
VCE V


Pt W
Infinite heatsink
with 7.5 cm² x 0.7 mm
ceramic substrate
Ta °C
VCE = –2.0 V
Pulsed
Ta = 125 °C
75 °C
25 °C
–25 °C
Ic A
VBE V


Ic – VCE
–100 mA
–90 mA
–80 mA
–70 mA
–60 mA
–50 mA
–40 mA
–30 mA
–20 mA
IB = –10 mA
Ic A
VCE V
hFE – Ic
VCE = –2.0 V
Pulsed
Ic A

( ) / Wh p shrdwxrh Prr iiohirr IU Uhiorw Vroghriqj+Pe-Frhh,

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 mm³)
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box