

/ Descriptions

Silicon PNP transistor in a TO-252 Plastic Package.

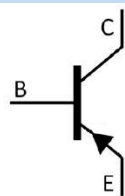
/ Features

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

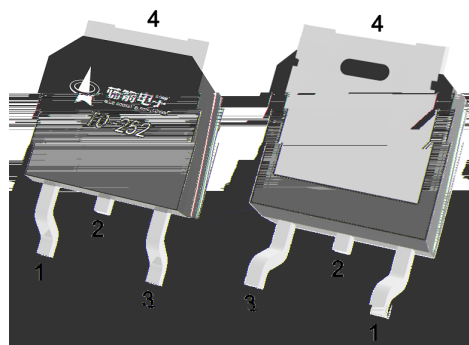
/ Applications

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

/ Absolute Maximum Ratings(Ta=25)

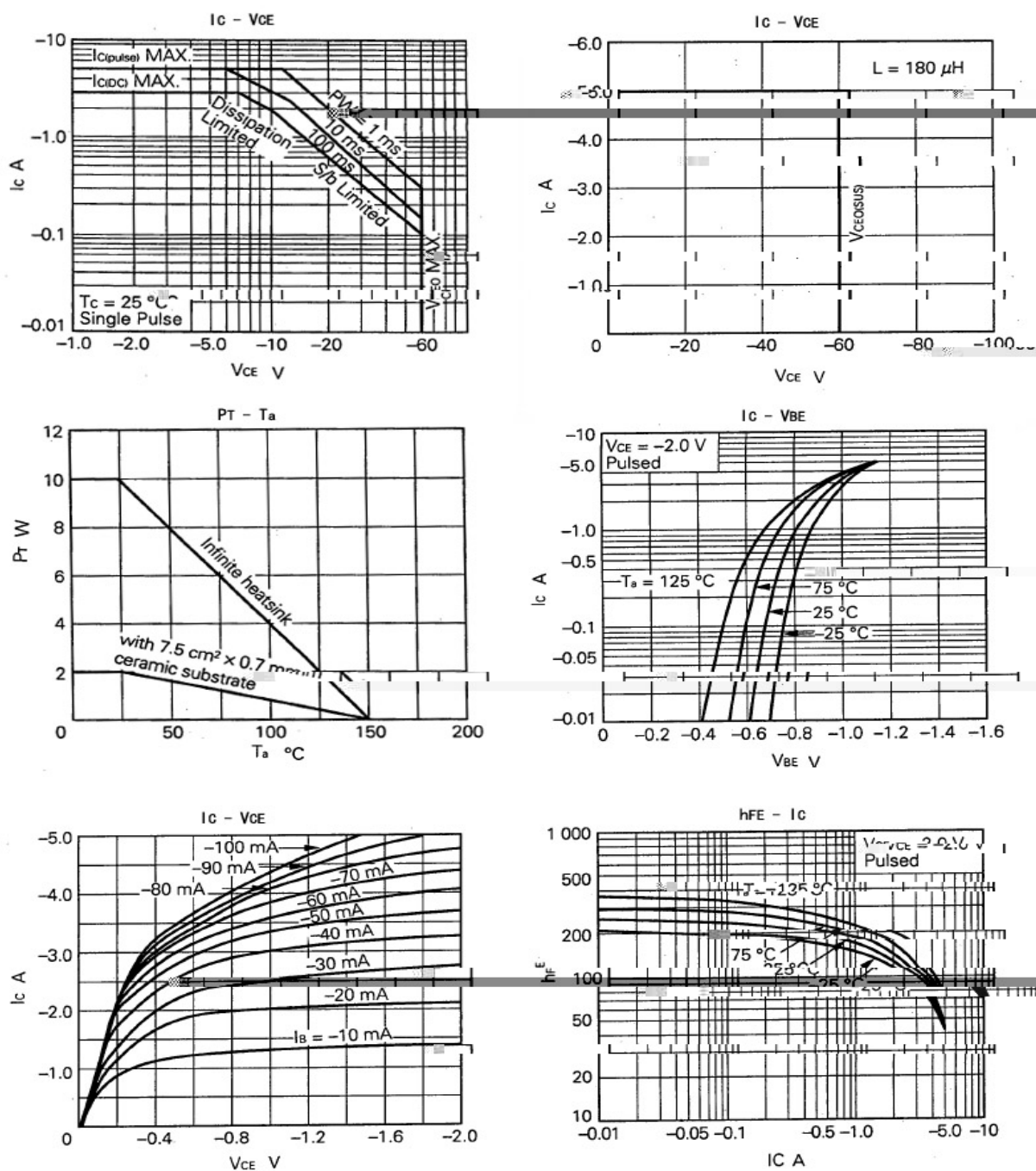
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-60	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-7.0	V
Collector Current - Continuous	I_C	-3.0	A
Collector Power Dissipation*	$*P_C$	2.0	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55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

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

/ Electrical Characteristics(Ta=25)

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}	$V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$		40		pF
Turn-On Time	t_{on}	$V_{CC}=-10V$ $I_C=-1.0A$ $I_{B1}=-I_{B2}=-0.1A$ $R_L=10\Omega$			0.5	μs
Storage Time	t_{stg}				2.0	
Fall Time	t_f				0.5	

/ Electrical Characteristic Curve



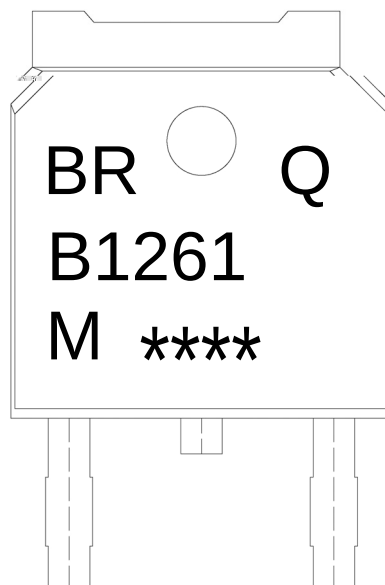
/ Package Dimensions



Dimensions In Millia



/ Marking Instructions



BR

Q

h_{FE}

Note:

BR: Company Code

Q: Automobile halogen-free product Code

B1261: Product Type

M: 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
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/ 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