

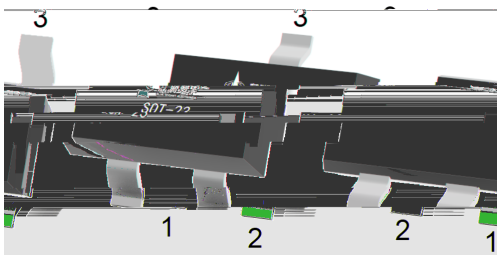
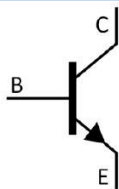
Rev.A Mar.-2023

SOT-23 NPN Silicon NPN transistor in a SOT-23 Plastic Package.

AEC-Q101

Low C_{ob} , Qualified to AEC-Q101 Standards for High Reliability, HF Product.

General amplifier, Meet the stringent requirements of automotive applications.



PIN1 Base PIN 2 Emitter PIN 3 Collector

h_{FE} Classifications Symbol	Q	R	S
h_{FE} Range	120 270	180 390	270 560
Marking	QBQ	QBR	QBS

@ f Parameter	... Z Symbol	f > Rating	% y Unit
Collector to Base Voltage	V _{CBO}	60	V
Collector to Emitter Voltage	V _{CEO}	50	V
Emitter to Base Voltage	V _{EBO}	7.0	V
Collector Current	I _C	150	mA
Collector Power Dissipation	P _C	200	mW
Junction Temperature	T _j	150	
Storage Temperature Range	T _{stg}	-55 150	

@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Collector- Base Breakdown Voltage	V _{CBO}	I _C =50 A	60			V
Collector-Emitter Breakdown Voltage	V _{CEO}	I _C =1.0mA	50			V
Emitter-Base Breakdown Voltage	V _{EBO}	I _E =50 A	7.0			V
Collector Cut-Off Current	I _{CBO}	V _{CB} =60V			0.1	A
Emitter Base Cut-Off Current	I _{EBO}	V _{EB} =7.0V			0.1	A
DC Current Gain	h _{FE}	V _{CE} =6.0V I _C =1.0mA	120		560	
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =50mA I _B =5.0mA			0.4	V
Transition Frequency	f _T	V _{CE} =12V f=100MHz I _E =-2.0mA		180		MHz
Collector Output Capacitance	C _{ob}	V _{CB} =12V f=1.0MHz I _E =0		2.0	3.5	pF

Ô ? d • Ž ¢ / Electrical Characteristic Curve

Ø □ =) ¢ / Package Dimensions

, M y f / Marking Instructions

QBQ

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Note:

Q: Automobile halogen-free product Code

(y Product Type Code

7 y h_{FE} Classifications Symbol

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Note:

10• Ä ½ “ † 150 ½200 - k ž • 60 ½120sec; 1.Preheating:150~200