/ Descriptions

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

/ Features

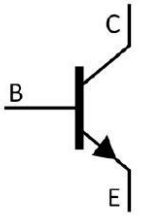
BR8550MQ AEC-Q101

Complementary pair with BR8550MQ, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

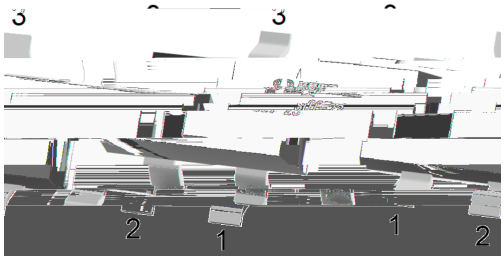
/ Applications

Power amplifier applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications
Symbol 3

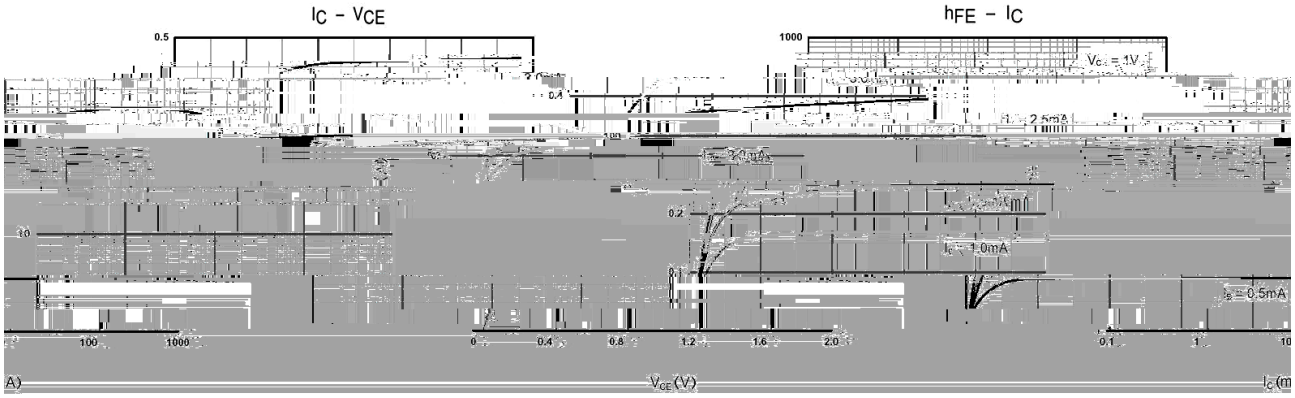
/ Absolute Maximum Ratings(Ta=25)

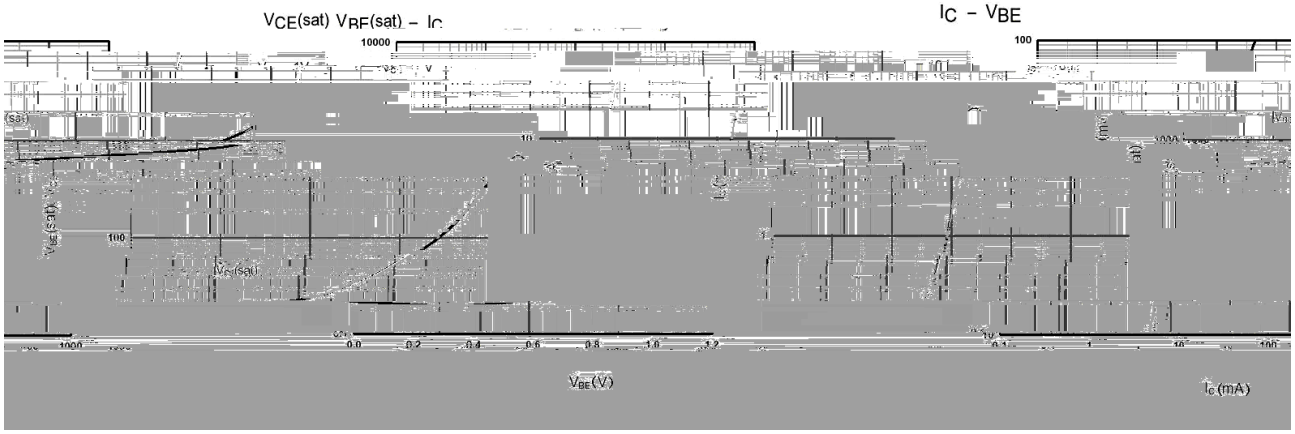
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current - Continuous	I_C	1.5	A
Base Current	I_B	0.5	A
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

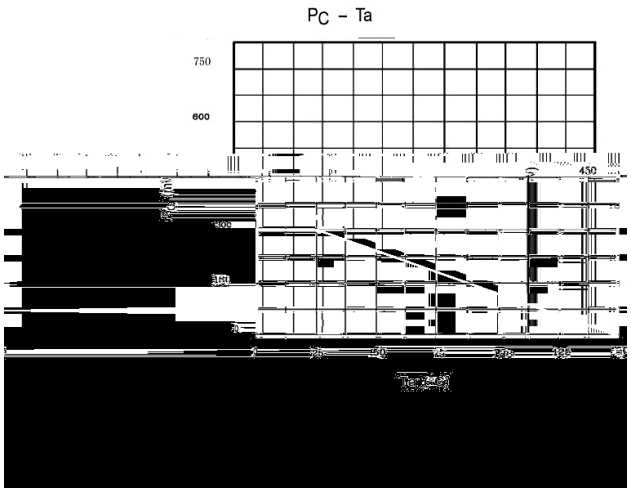
/ Electrical Characteristics(Ta=25)

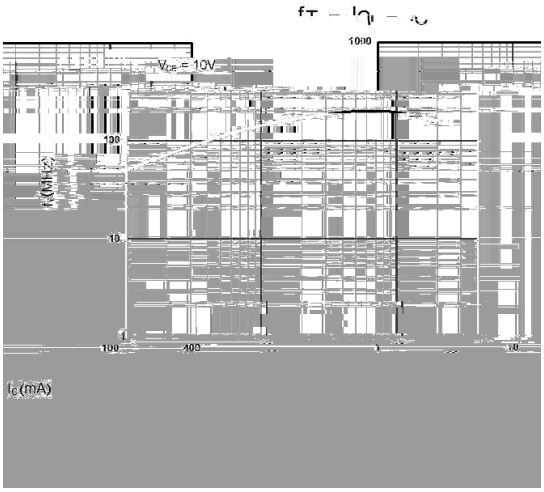
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=0.1mA I_E=0	40			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=2.0mA I_B=0	25			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_C=0.1mA I_C=0	6.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=35V I_E=0			0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=6.0V I_C=0			0.1	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=1.0V I_C=100mA	85		300	
	$h_{FE(2)}$	V_{CE}=1.0V I_C=800mA	40			
	$h_{FE(3)}$	V_{CE}=1.0V I_C=5.0mA	45			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=800mA I_B=80mA		0.28	0.5	V
Base to Emitter Voltage	V_{BE}	V_{CE}=1.0V I_C=10mA		0.66	1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=800mA I_B=80mA		0.98	1.2	V
Transition Frequency	f_T	I_C=50mA V_{CE}=10V	100	190		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V I_E=0 f=1.0MHz		9.0		pF

/ Electrical Characteristic Curve

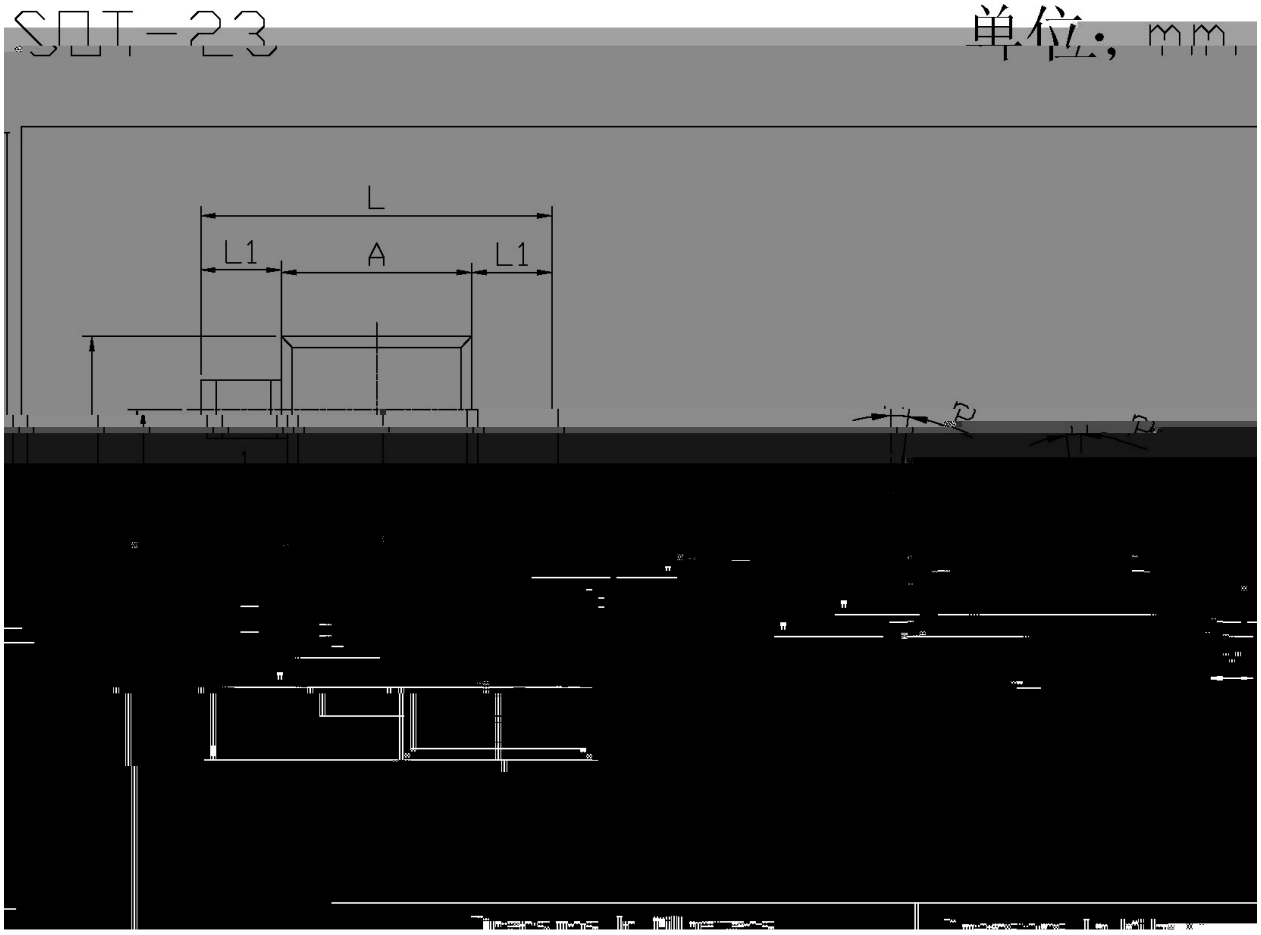








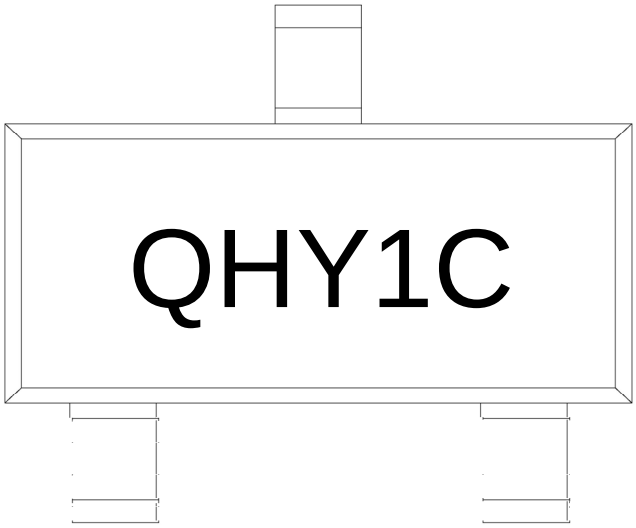
/ Package Dimensions



	0.20			
	0.10			
	0MIN			

A	1.15	1.50	c	0.05
B	2.70	3.10	K	0
E	1.70	2.10	M	0.2

/ Marking Instructions



Q

H

Y1

C h_{FE}

Note:

Q: Automobile halogen-free product Code

H: Company Code.

Y1: Product Type .

C: h_{FE} Classifications Symbol Code.

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

1 150 200 60