/ Descriptions

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

/ Features

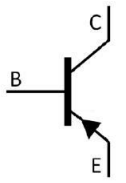
BR8050MQ AEC-Q101

Complementary pair with BR8050MQ, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

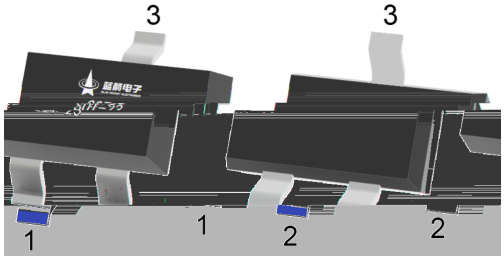
/ Applications

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	B	C	D
h_{FE} Range	85 160	120 200	160 300
Marking	QHY2B	QHY2C	QHY2D

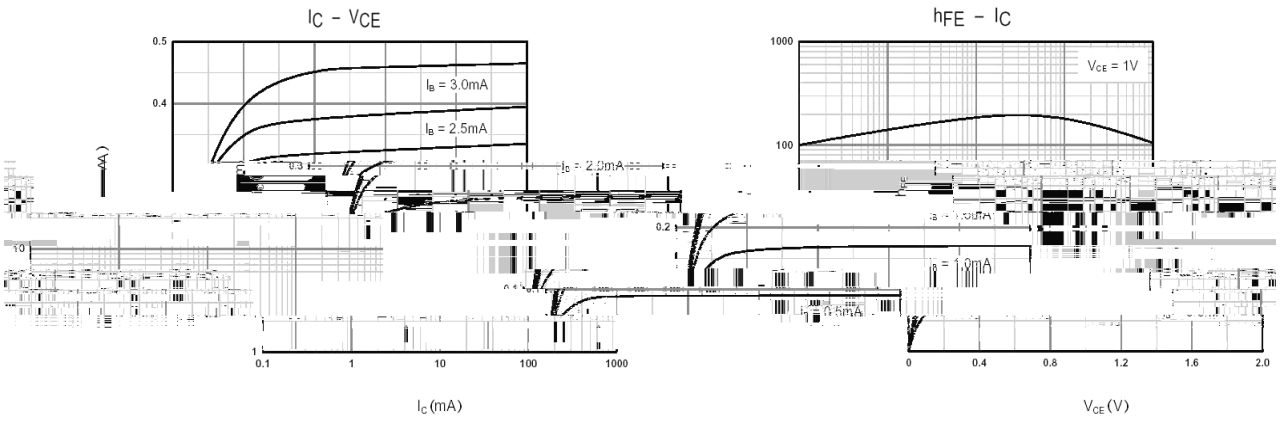
/ Absolute Maximum Ratings(Ta=25)

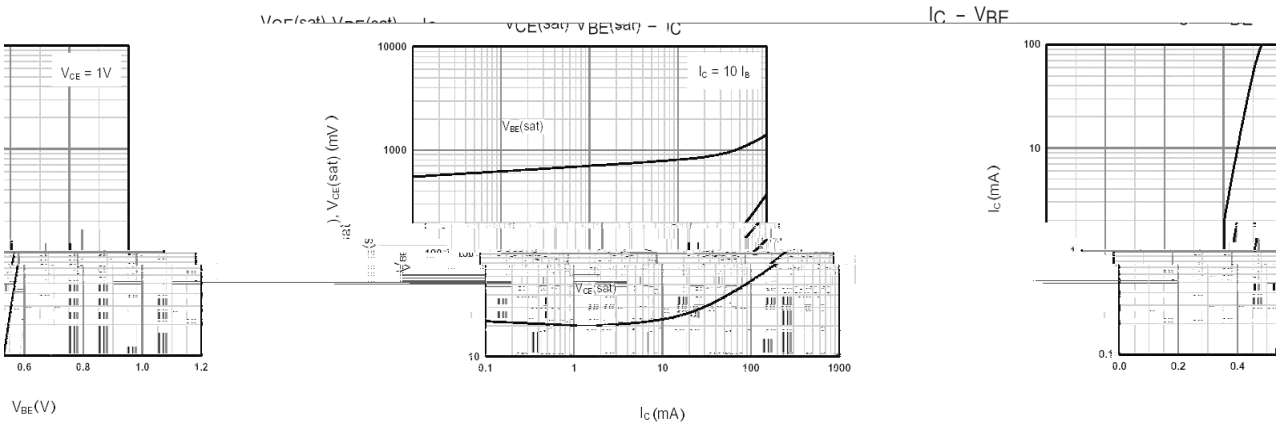
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-40	V
Collector to Emitter Voltage	V_{CEO}	-25	V
Emitter to Base Voltage	V_{EBO}	-6.0	V
Collector Current	I_C	-1.5	A
Base Current	I_B	-0.5	A
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

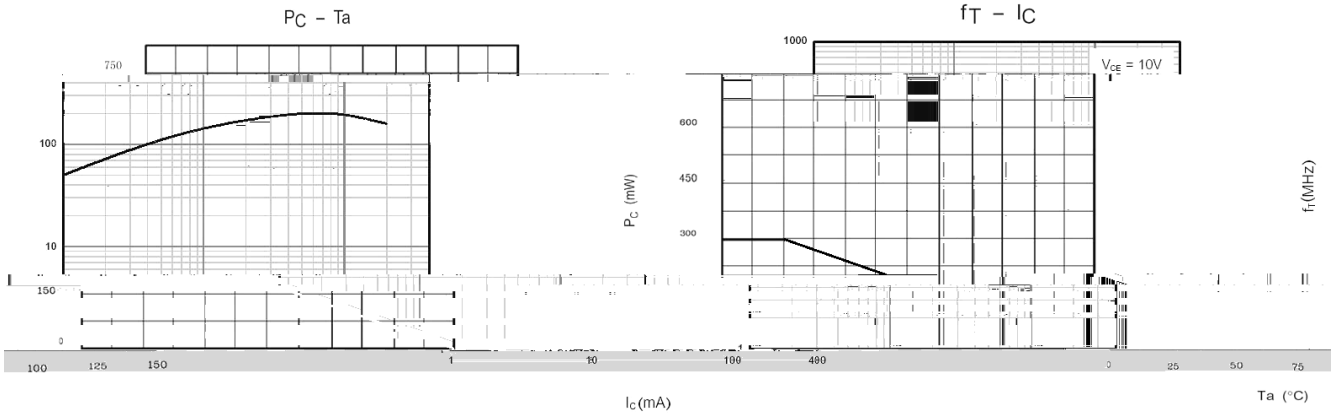
/ Electrical Characteristics(Ta=25)

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_E=-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-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-800mA I_B=-80mA		-0.28	-0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=-800mA I_B=-80mA		-0.98	-1.2	V
Base-Emitter Voltage	V_{BE}	V_{CE}=-1.0V I_C=-10mA		-0.66	-1.0	V
Transition Frequency	f_T	V_{CE}=-10V I_C=-50mA	100	200		MHz
Collector Output Capacitance	C_{ob}	V_{CB}=-10V I_E=0 f=1.0MHz		15		pF

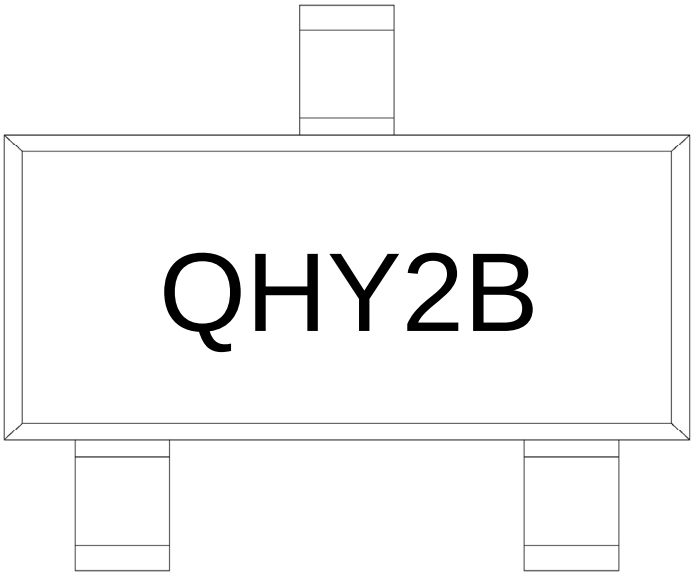
/ Electrical Characteristic Curve







/ Marking Instructions



Q

H

Y2

B h_{FE}

Note:

Q: Automobile halogen-free product Code

H Company Code

Y2 Product Type Code

B h_{FE} Classifications Symbol Code

( ) / 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

/ Packaging SPEC.

/ REEL

Package Type