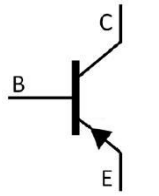
SOT-89 PNP Silicon PNP transistor in a SOT-89 Plastic Package.

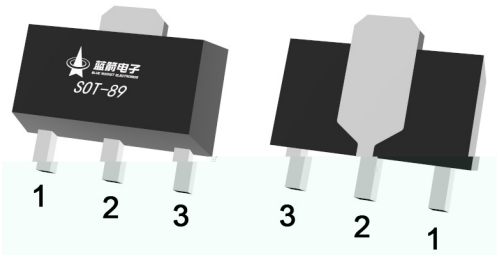
BR2SD1898Q AEC-Q101

High breakdown voltage, good h_{FE} linearity, low $V_{CE(sat)}$, complements the BR2SD1898Q, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

General power amplifier applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit





PIN1 Base PIN 2 Collector PIN 3 Emitter

/ Absolute Maximum Ratings(Ta=25)

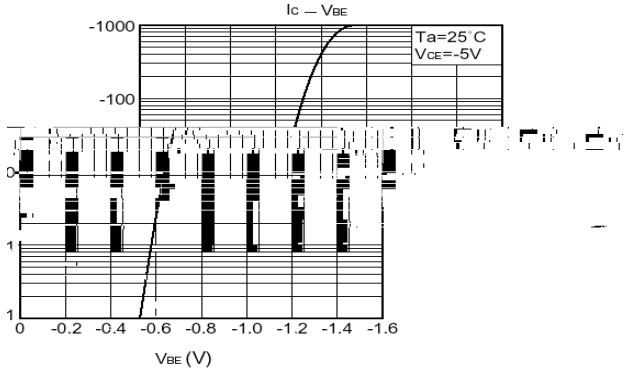
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-80	V
Collector to Emitter Voltage	V_{CEO}	-80	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current-Continuous	I_C	-1.0	A
Collector Current-Continuous(Pulse)	*I_{CP}	-2.0	A
Collector Power Dissipation	**P_C	0.5	W
	*P_C	2.0	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

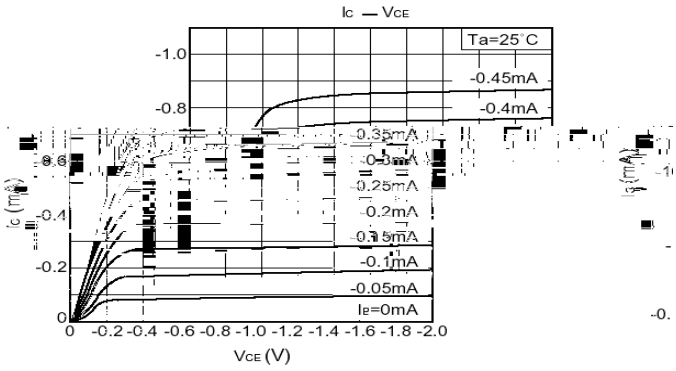
*Single pulse Pw=100ms 100ms
**mounted on 40×40×0.7mm ceramic board 40×40×0.7m

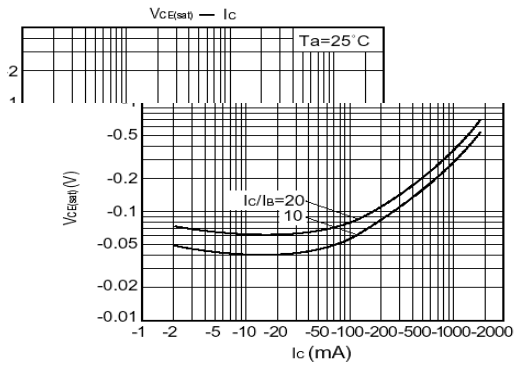
/ Electrical Characteristics(Ta=25)

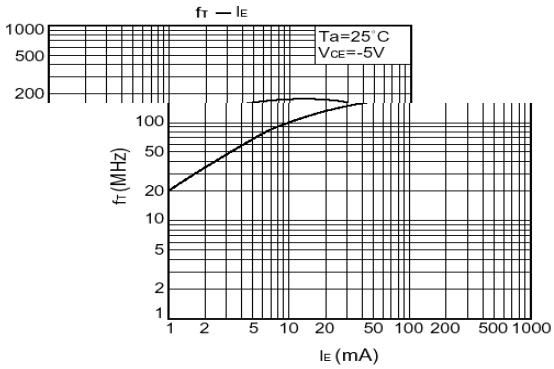
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=-50μA I_E=0	-80			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=-1.0mA I_B=0	-80			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=-50μA I_C=0	-5.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=-60V I_E=0			-1.0	μA
Emitter Base Cut-Off Current	I_{EBO}	V_{EB}=-4.0V I_C=0			-1.0	μA
DC Current Gain	h_{FE}	V_{CE}=-3.0V I_C=-0.1A	82		390	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-500mA I_B=-50mA			-0.4	V
Transition Frequency	f_T	V_{CE}=-5.0V I_C=-50 mA f=30MHz		100		MHz
Collector Output Capacitance	C_{ob}	V_{CE}=-10V I_E=0 f=1.0MHz		25		pF

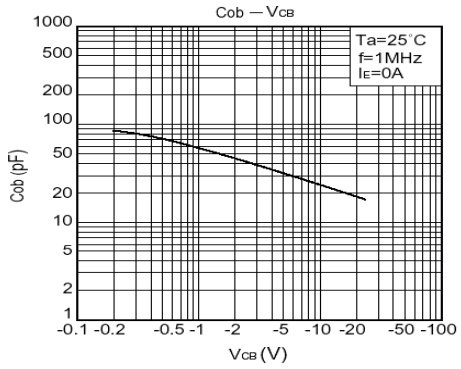
/ Electrical Characteristic Curve

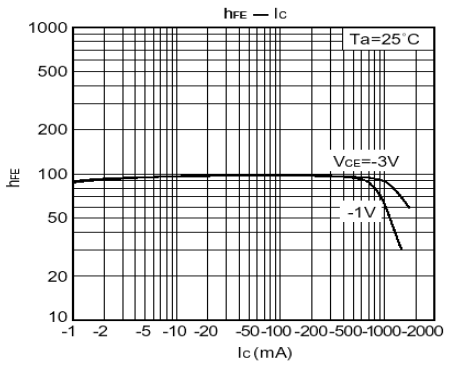


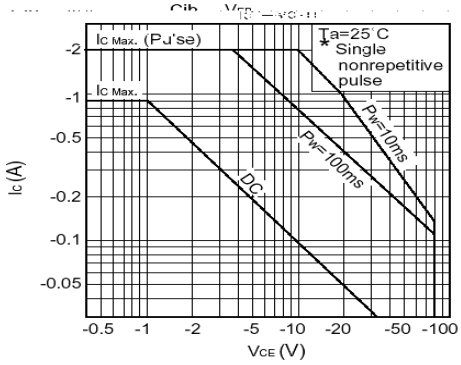


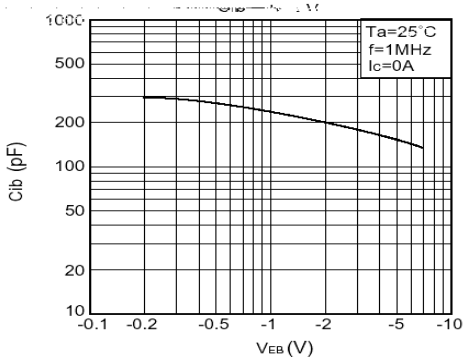




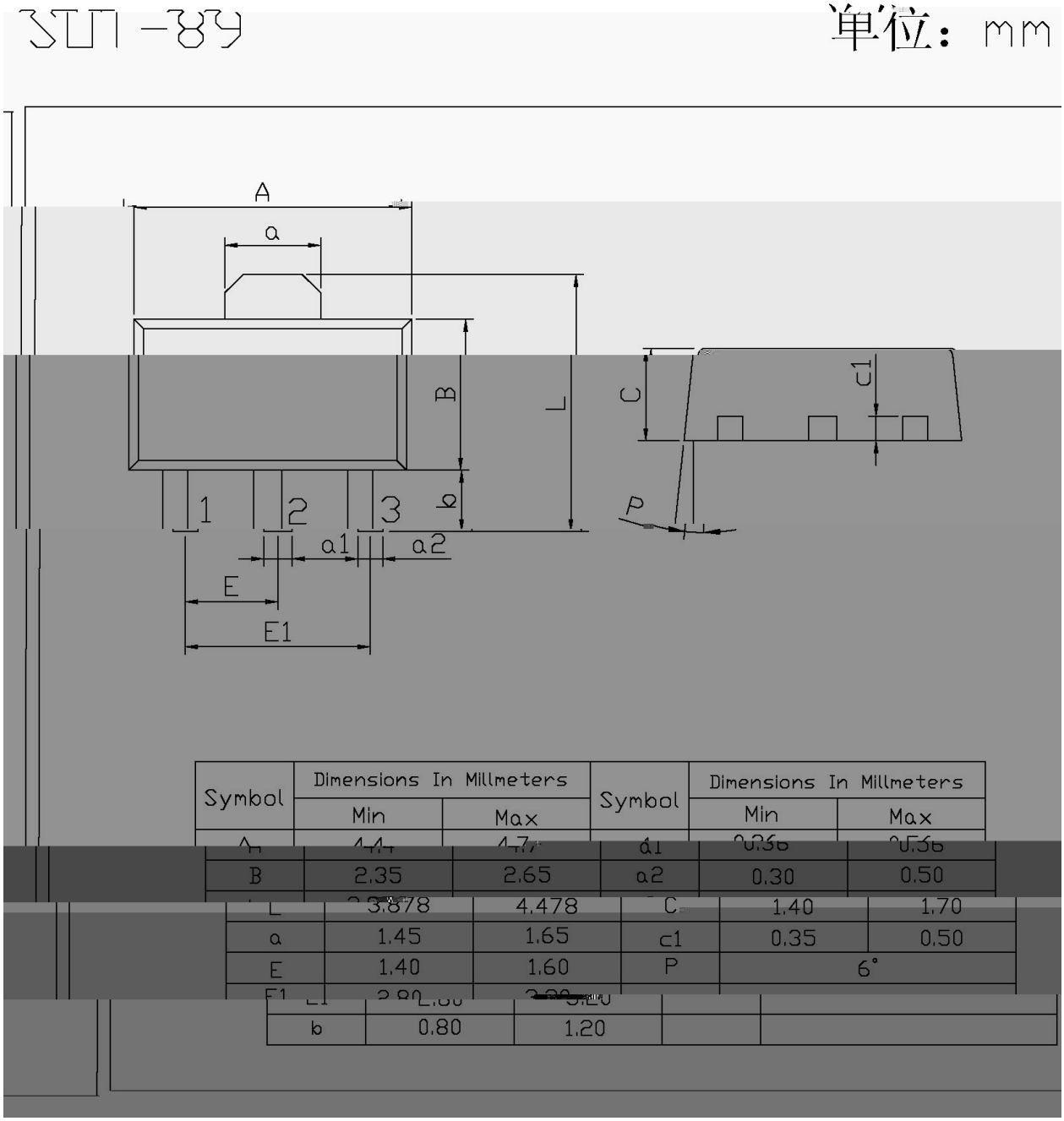






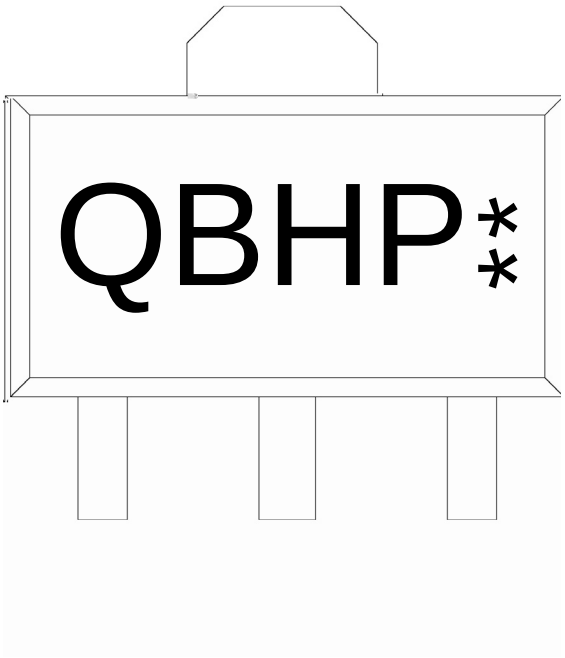


/ Package Dimensions



Symbol	Dimensions In Millmeters		Symbol	Dimensions In Millmeters	
	Min	Max		Min	Max
A	4.4	4.7	a1	0.36	0.56
B	2.35	2.65	a2	0.30	0.50
L	3.878	4.478	C	1.40	1.70
a	1.45	1.65	c1	0.35	0.50
E	1.40	1.60	P	6°	
E1	2.90	3.20			
b	0.80	1.20			

/ Marking Instructions

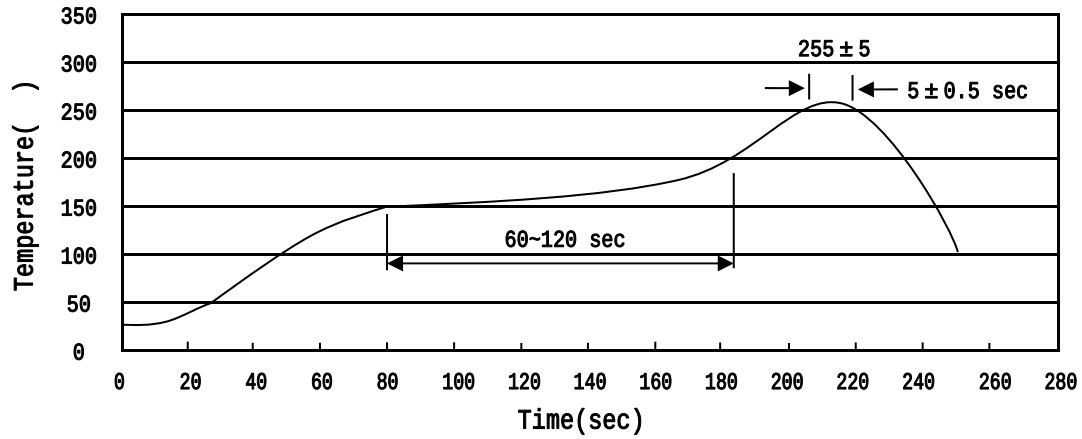


Q	
BH	
P	h_{FE}
**	

Note:

Q:	Automobile halogen-free product Code
BH:	Product Type
P	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

/ 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
SOT-89	1,000	7	7,000	6	42,000	7 ×12	180×120×180	390×385×205

/ Notices