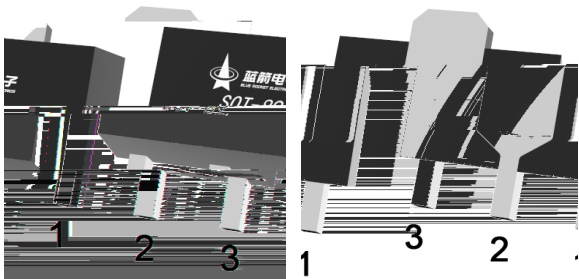
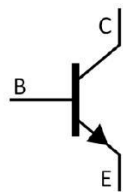


Silicon NPN transistor in a SOT-89 Plastic Package.

BR2SB1424Q AEC-Q101

Low $V_{CE(sat)}$,excellent current gain characteristic, Complementary to BR2SB1424Q, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

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



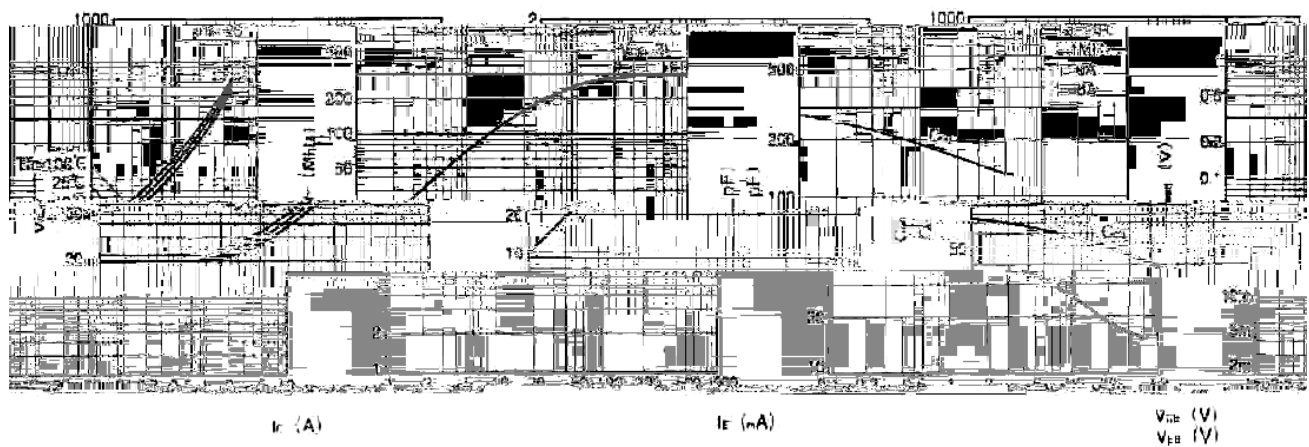
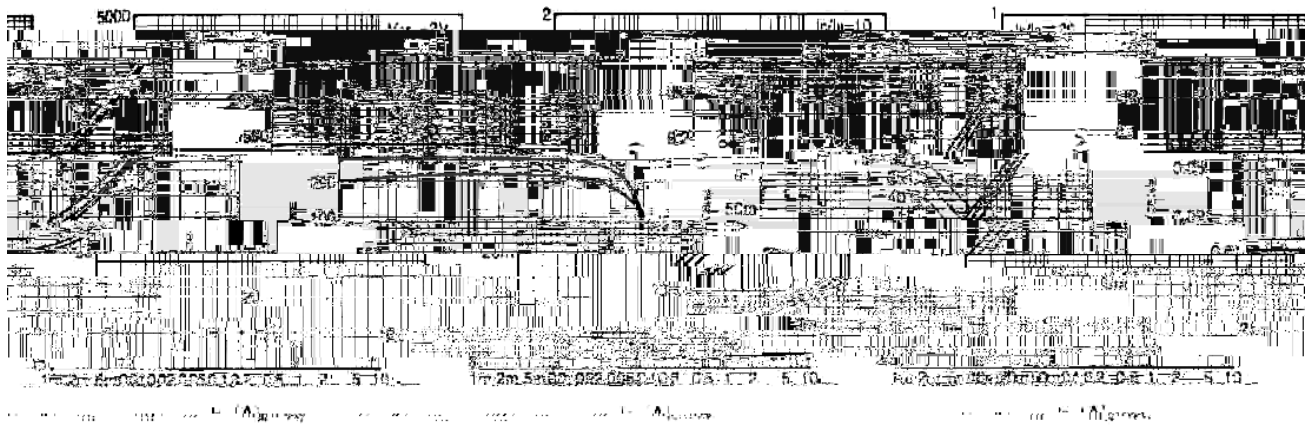
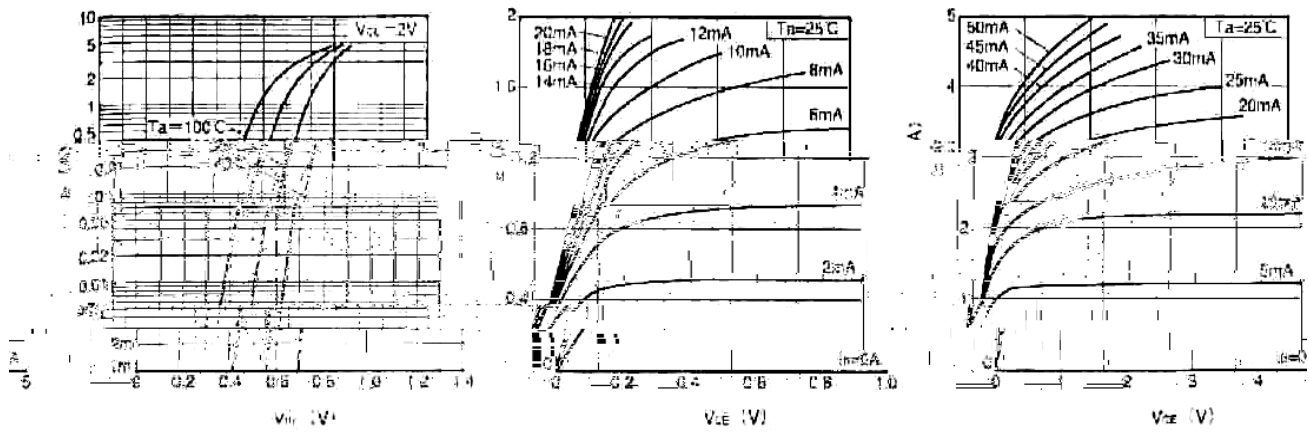
PIN1 Base PIN 2 Collector PIN 3 Emitter

h_{FE} Classifications Symbol	Q	R	S	E
h_{FE} Range	120 270	180 390	270 560	390 820
Marking	QCFQ*	QCFR*	QCFS*	QCFE*

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	20	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current-Continuous	$I_{C(DC)}$	3.0	A
Collector Base-Continuous(Pulse)*	$I_{C(Pulse)*}$	5.0	A
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C

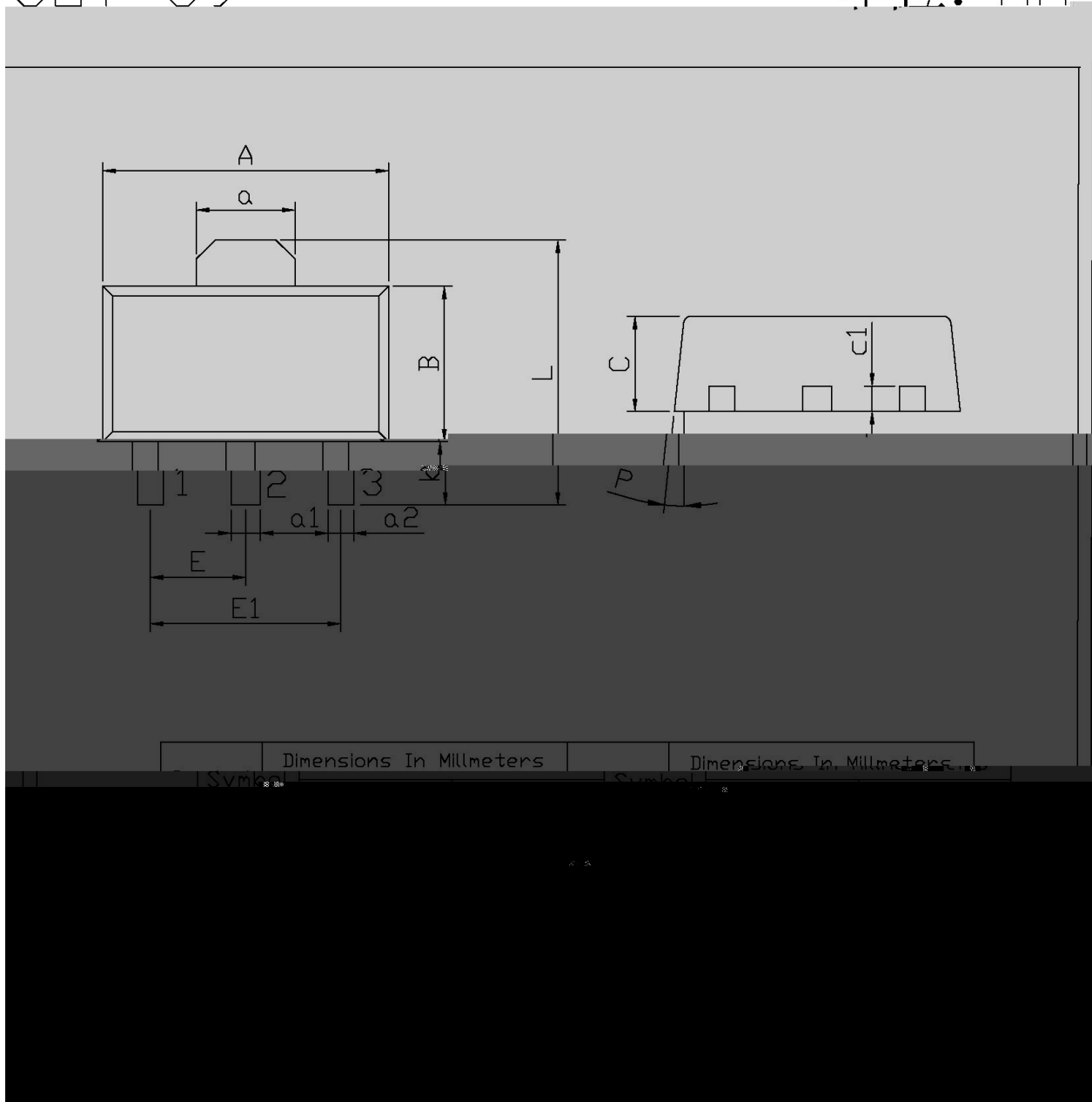
*:Single pulse $P_w=10ms$

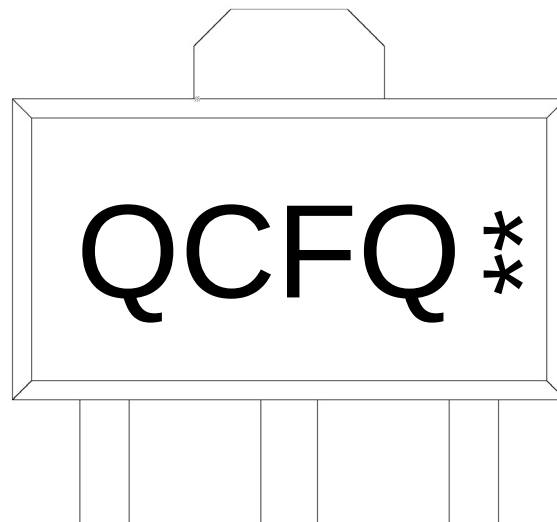
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=50\mu A$	40			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$	20			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=50\mu A$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=2.0V$ $I_C=100mA$	180		560	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0A$ $I_B=100mA$		0.2	0.5	V
Transition Frequency	f_T	$V_{CE}=2.0V$ $I_C=0.5A$ $f=100MHz$		290		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		25		pF



SOT-89

单位: mm





Q

CF

Q: h_{FE}

Note:

Q: Automobile halogen-free product Code

CF: Product Type

Q 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.

260 5

10 1 sec.

Temp.:260±5℃

Time:10±1 sec

/ 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