

/ Descriptions

Silicon PNP transistor in a SOT-89 Plastic Package.

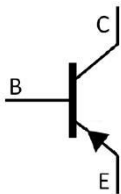
/ Features

High current, low voltage,Qualified to AEC-Q101 Standards for High Reliability, HF Product.

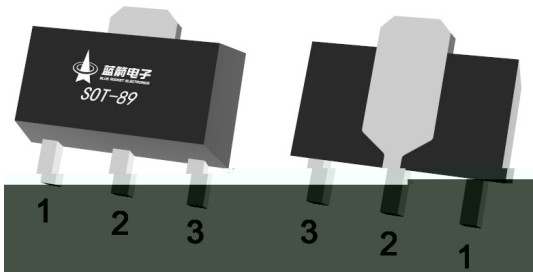
/ Applications

Driver stages of audio and video amplifiers, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ hFE Classifications & Marking

hFE(1) Classifications	10	16
hFE(1) Range	63 160	100 250
Marking	QAK *	QAL *

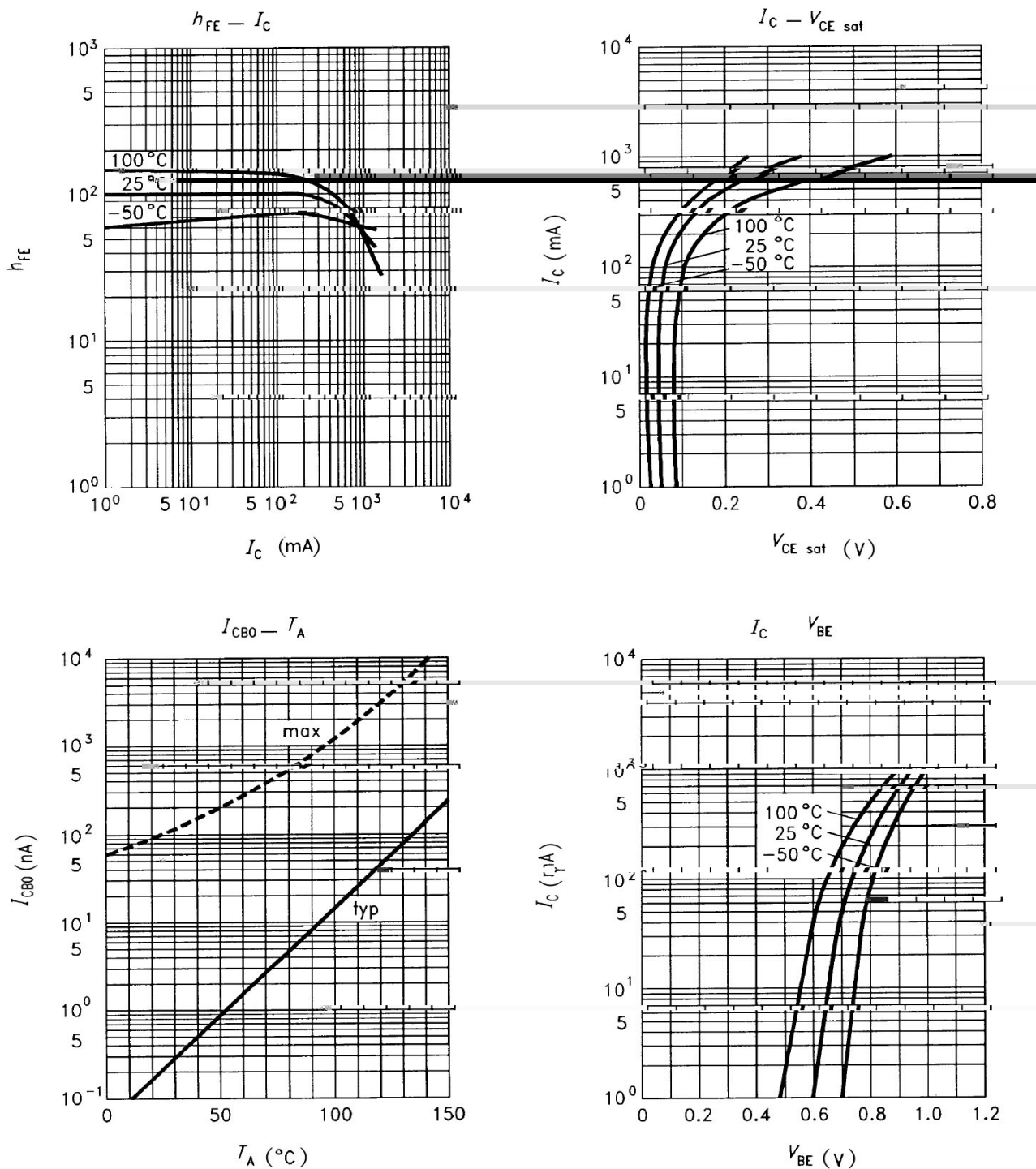
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-80	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-1	A
Peak Collector Current	I_{CM}	-1.5	A
Peak Base Current	I_{BM}	-0.2	A
Collector Power Dissipation	$P_C(T_C=25^{\circ}C)$	1.3	W
Storage Temperature Range	T_{stg}	-55 150	$^{\circ}C$

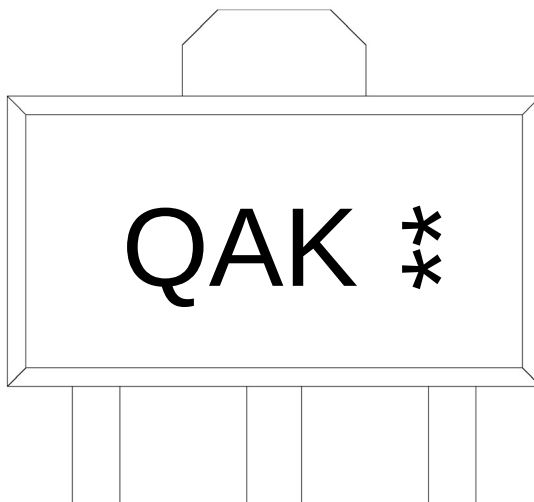
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	$I_{CBO(1)}$	$V_{CB}=-30V$ $I_E=0$			-0.1	μA
	$I_{CBO(2)}$	$V_{CB}=-30V$ $I_E=0$ $T_J=125^{\circ}C$			-10	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=-5V$ $I_C=0$			-0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-2V$ $I_C=-150mA$	63		250	
	$h_{FE(2)}$	$V_{CE}=-2V$ $I_C=-5mA$	40			
	$h_{FE(3)}$	$V_{CE}=-2V$ $I_C=-500mA$	25			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-500mA$ $I_B=-50mA$			-0.5	V
Base to Emitter Voltage	V_{BE}	$I_C=-500mA$ $V_{CE}=-2V$			-1	V
Transition Frequency	f_T	$I_C=-10mA$ $f=100MHz$ $V_{CE}=-5.0V$		50		MHz

I Electrical Characteristic Curve



/ Marking Instructions



AK

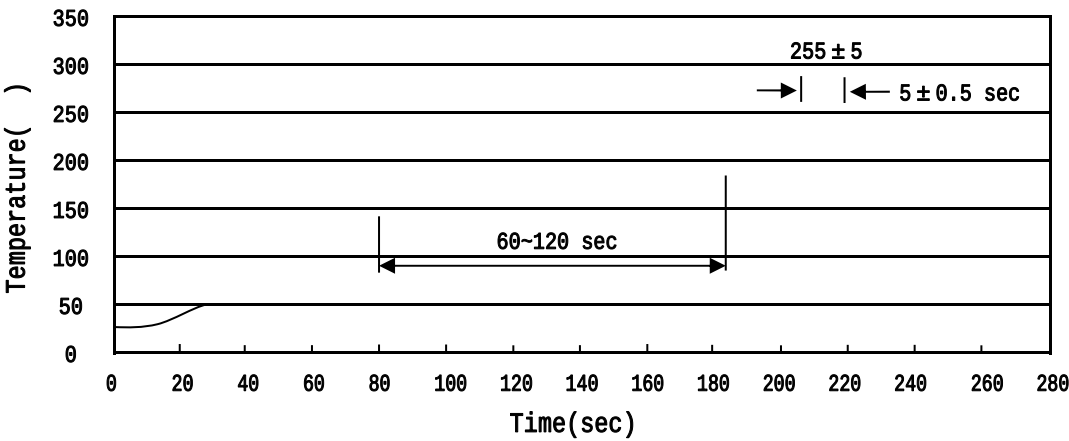
Note:

Q: Automobile halogen-free product Code

AK: Product Type Code

** : 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 7~ E	Units ;>û H					Dimension ;>û p . (unit /mm³)		
	Units/Reel / --	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box	Outer Boxç
SOT-89	1,000	7	7,000	6	42,000	7 ×12	180×120×180	390×385×205

/ Notices