

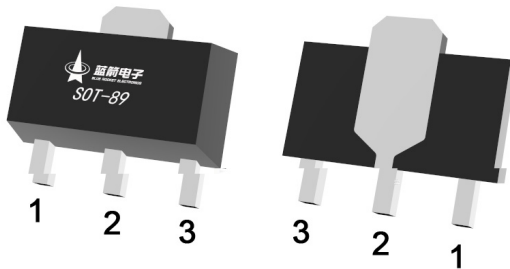
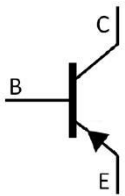
Rev.A Dec.-2024

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

AEC-Q101

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

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

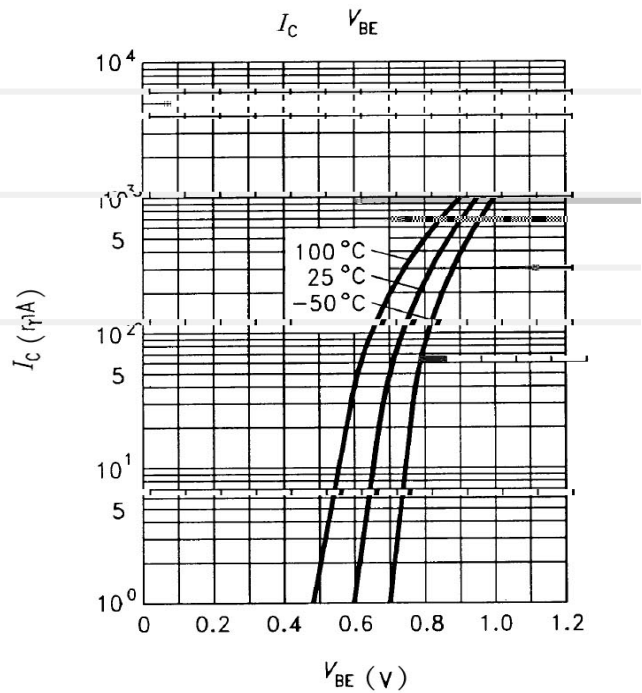
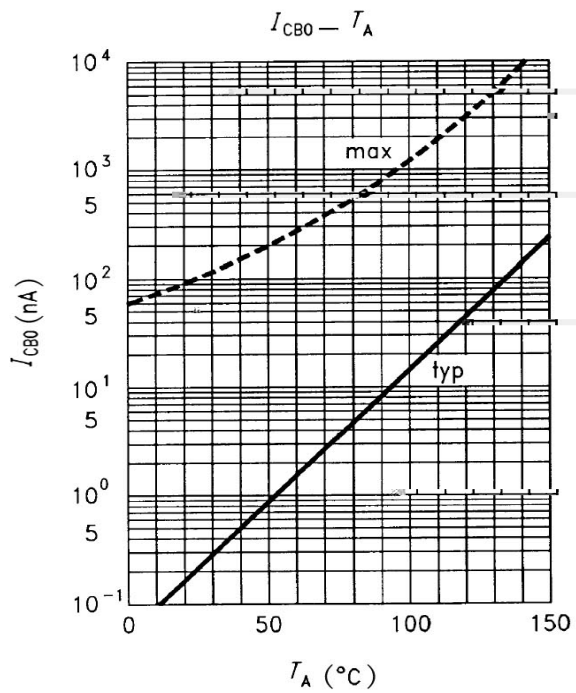
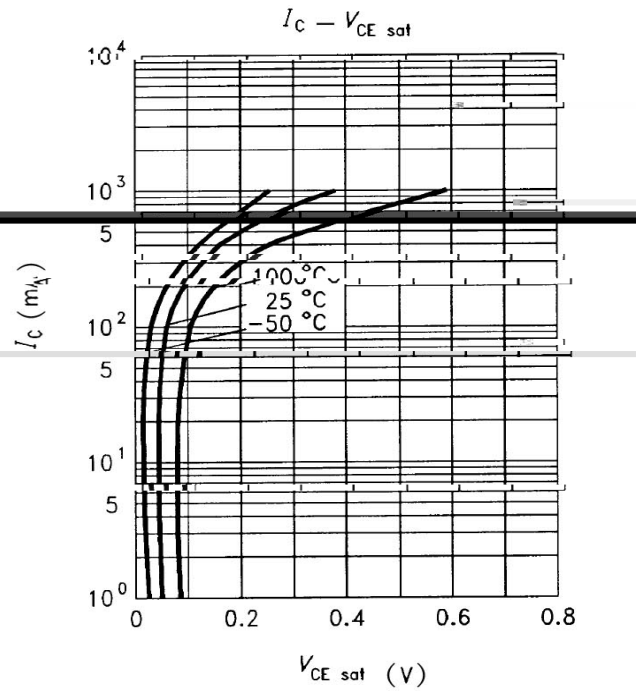
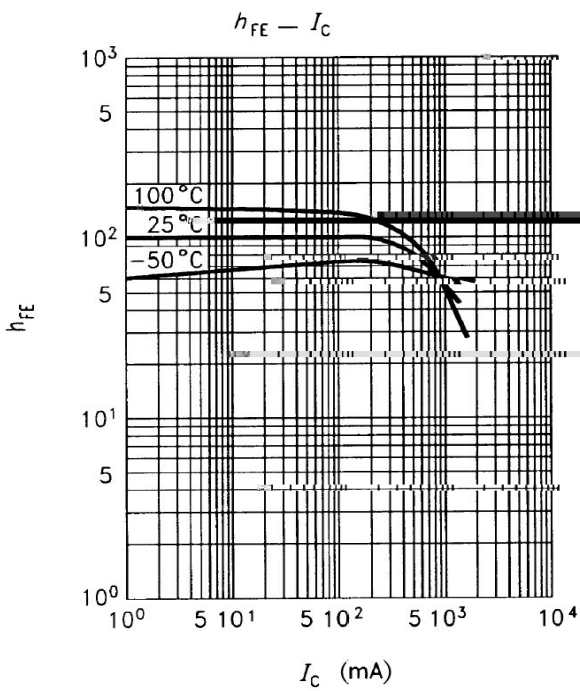


PIN1 Base PIN 2 Collector PIN 3 Emitter

$h_{FE(1)}$ Classifications	10	16
$h_{FE(1)}$ Range	63 160	100 250
Marking	QAK *	QAL *

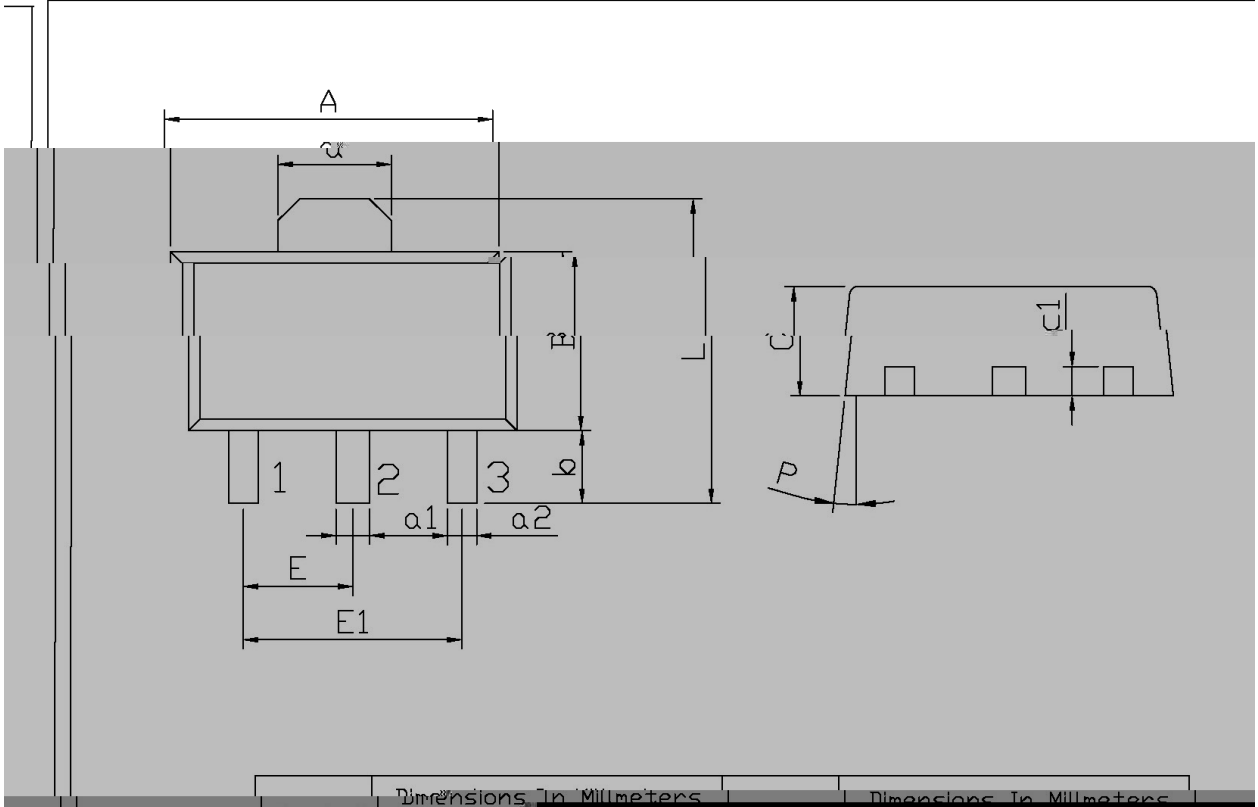
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-80	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-1	A
Peak Collector Current	I_{CM}	-1.5	A
Peak Base Current	I_{BM}	-0.2	A
Collector Power Dissipation	$P_C(T_C=25^{\circ}C)$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

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



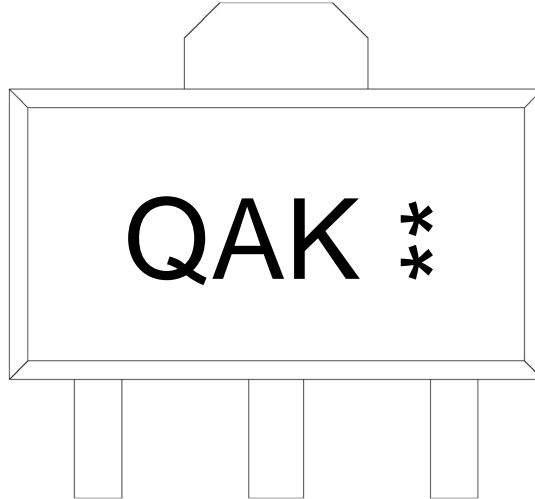
FSR1-89

单位: mm



Dimensions In Millimeters

Dimensions In Millimeters



Q

AK

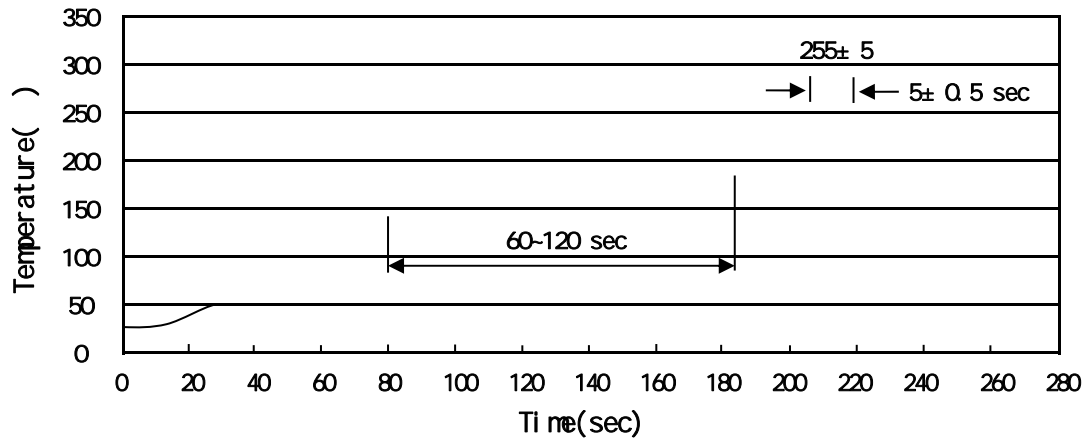
**

Note:

Q: Automobile halogen-free product Code

AK: Product Type Code

** : Lot No. Code, code change with Lot No



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°C

Time:10±1 sec

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	1000	7	7,000	6	42,000	7 x12	180x120x180	390x385x205
SOT-89	1,000	7	7,000	6	42,000	7 x12	180x120x180	390x385x205