

/ Descriptions

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

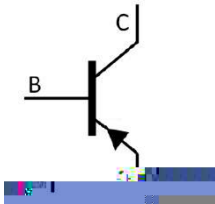
/ Features

2SD1781K
 Low $V_{CE(sat)}$, complements the 2SD1781K.

/ Applications

Low frequency amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	Q	R
h_{FE} Range	120 270	180 390
Marking	HAHQ	HAHR

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-40	V
Collector to Emitter Voltage	V_{CEO}	-32	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current	I_C	-800	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	V_{CBO}	$I_C = -50\mu A$	-40			V
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C = -1.0mA$	-32			V
Emitter-Base Breakdown Voltage	V_{EBO}	$I_E = -50\mu A$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -20V$ $I_E = 0$			-0.5	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB} = -4.0V$ $I_C = 0$			-0.5	μA
DC Current Gain	h_{FE}	$V_{CE} = -3.0V$ $I_C = -100mA$	120		390	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_{CI}				

Electrical Characteristic Curve

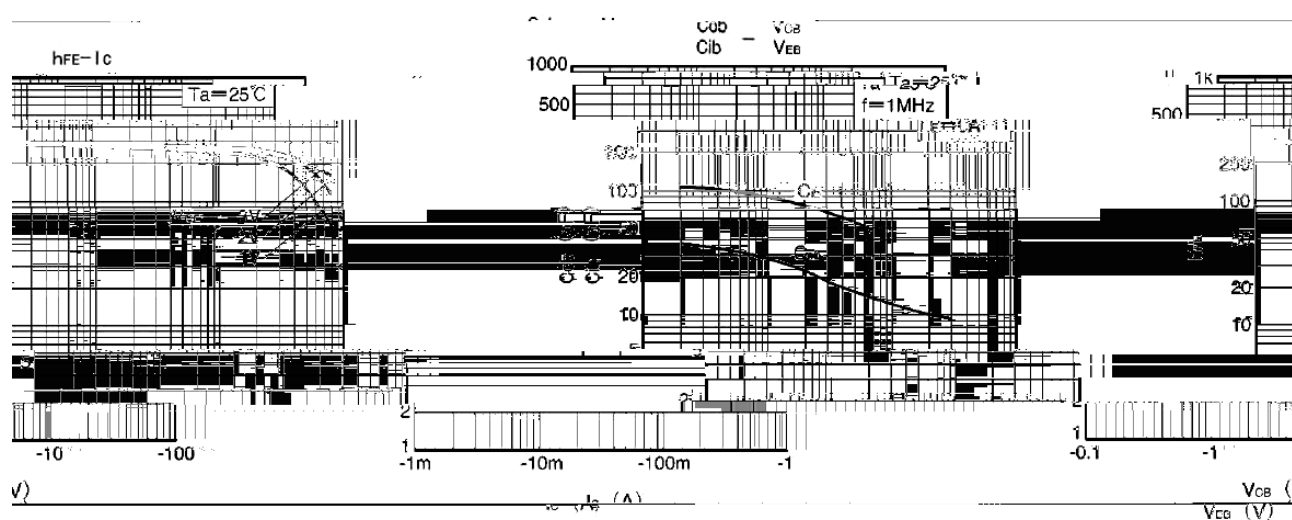
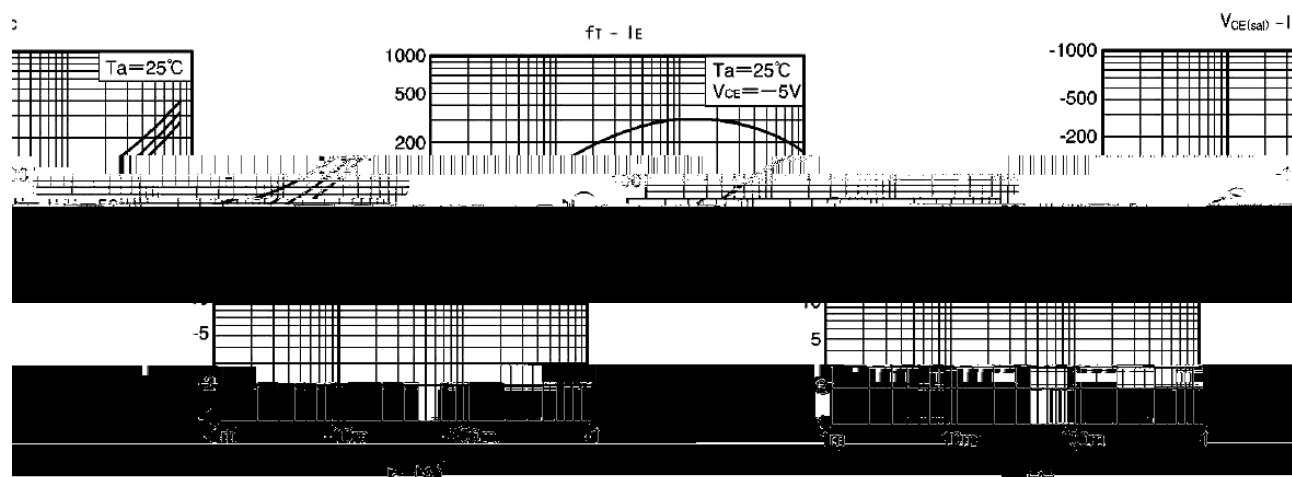
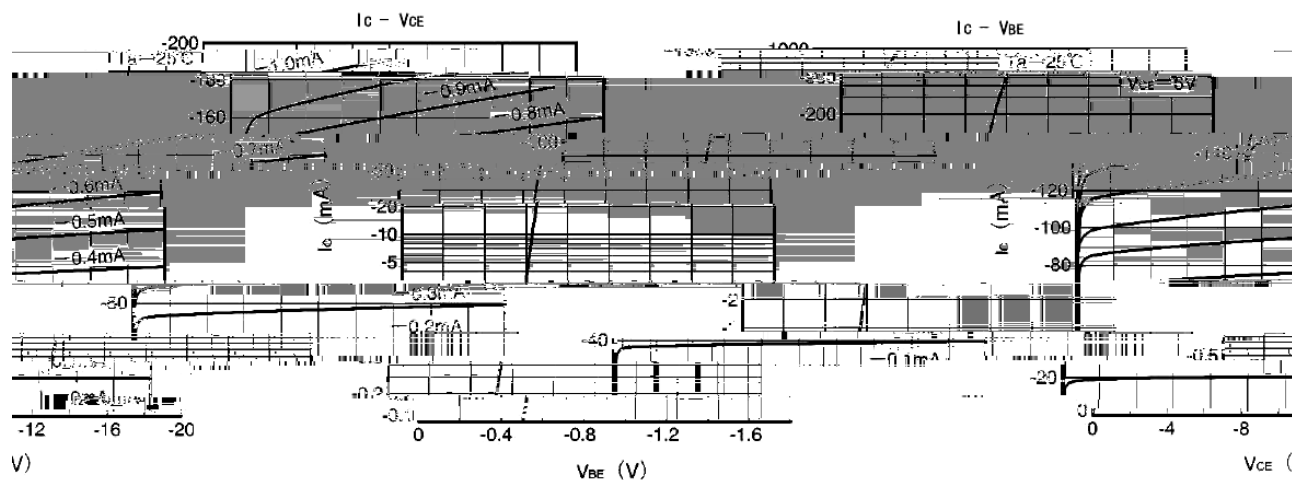
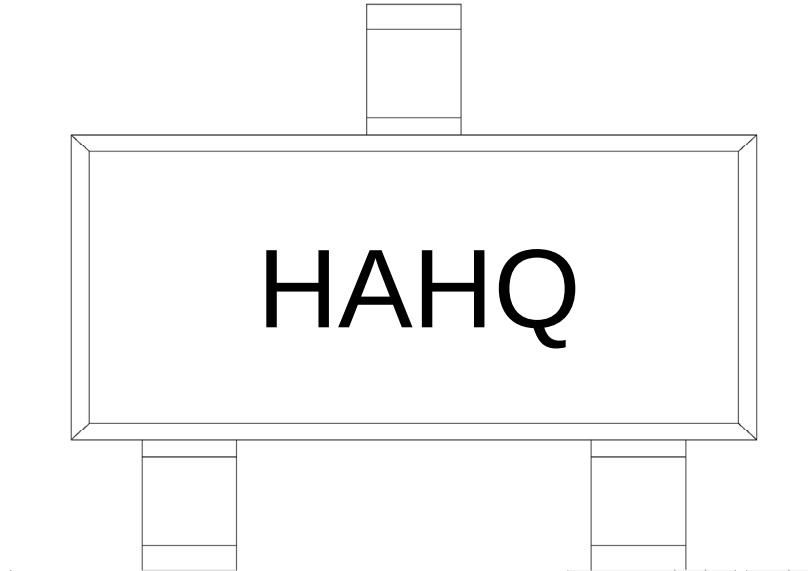


Figure 1: A technical drawing of a mechanical part, likely a valve or pump component, shown in multiple views (top, side, and cross-section). The drawing includes detailed dimensions and annotations in Chinese. The top view shows a circular flange with a central opening and a complex internal structure. The side view shows the profile of the component, including a curved section. The cross-section view shows the internal components, including a central shaft and various seals and bearings. The drawing is labeled with '图 1' (Figure 1) and '图 2' (Figure 2).

/ Marking Instructions



H

AH

Q: h_{FE}

Note:

H: Company Code

AH: Product Type Code

Q: h_{FE} Classifications Symbol Code

() / Temperature Profile for IR Reflow Soldering(Pb [