

/ Descriptions

Silicon NPN transistor in a SOT-23 Plastic Package.

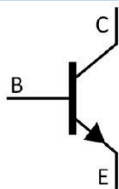
/ Features

Large I_C , low $V_{CE(sat)}$, complementary pair with the 2SA1036K.

/ Applications

Medium power amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	P	Q	R
h_{FE} Range	82 180	120 270	180 390
Marking	HCP	HCQ	HCR

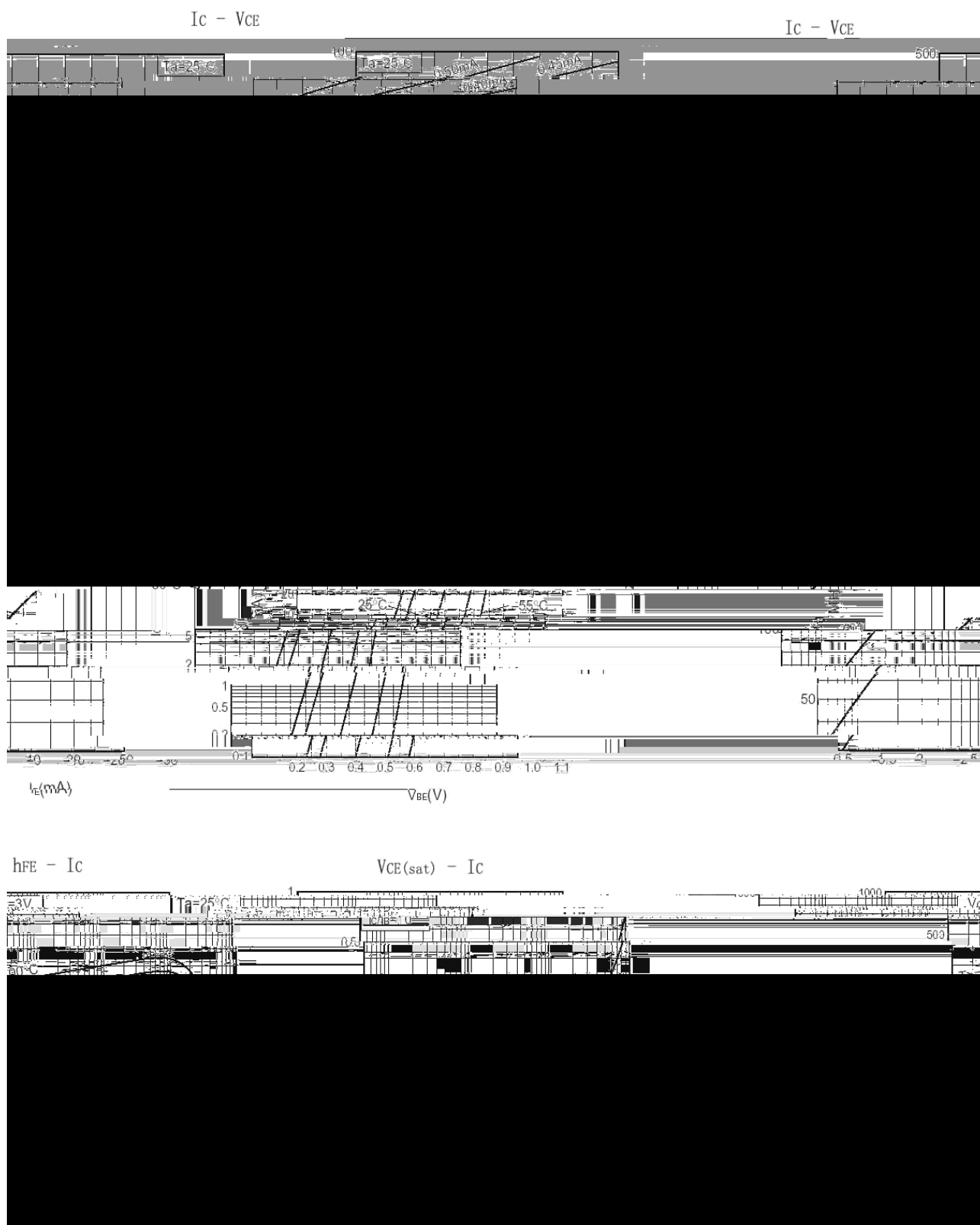


Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	32	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	500	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

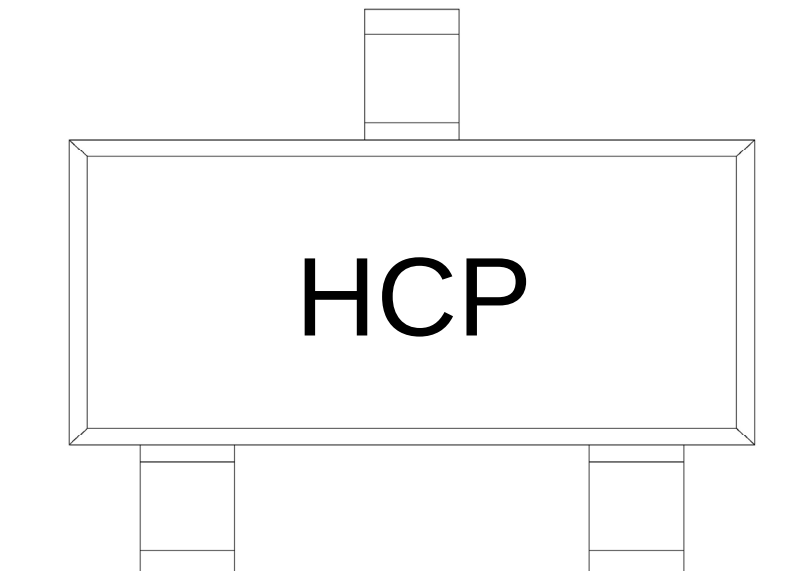
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- Base Breakdown Voltage	V_{CBO}	$I_C = 100 \text{ A}$	40			V
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C = 1.0 \text{ mA}$	32			V
Emitter-Base Breakdown Voltage	V_{EBO}	$I_E = 100 \text{ A}$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = 20 \text{ V}$			1.0	A
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB} = 4.0 \text{ V}$			1.0	A
DC Current Gain	h_{FE}	$V_{CE} = 3.0 \text{ V}$ $I_C = 10 \text{ mA}$	82		390	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 100 \text{ mA}$ $I_B = 1.0 \text{ mA}$			0.4	V

Tf57.0 10.5 268.02 358.2803 Tm0 Tc(V)Tj7.02 0 0 7.02 275.04 356.7803.0031 Tw(T)31m-0.06(f1 Tw[TH.5 57.66 29

/ Electrical Characteristic Curve



/ Marking Instructions



h_{FE}

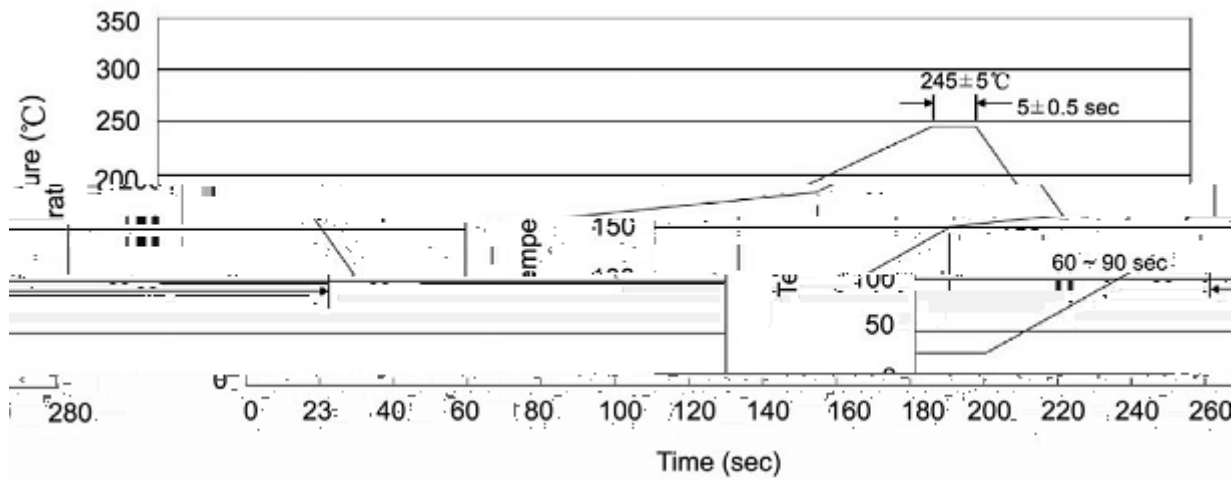
Note:

Company Code

Product Type Code

h_{FE} Classifications Symbol Code

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

25 150

60 90sec;

1.Preheating:25~150 °C, Time:60~90sec.
- 2

245 5

5 0.5sec;

2.Peak Temp.:245±5 °C, 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 mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices