/ Descriptions

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

/ Features

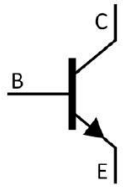
BCW68

Complementary to BCW68.

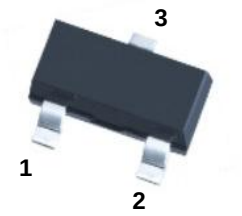
/ Applications

Medium power amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

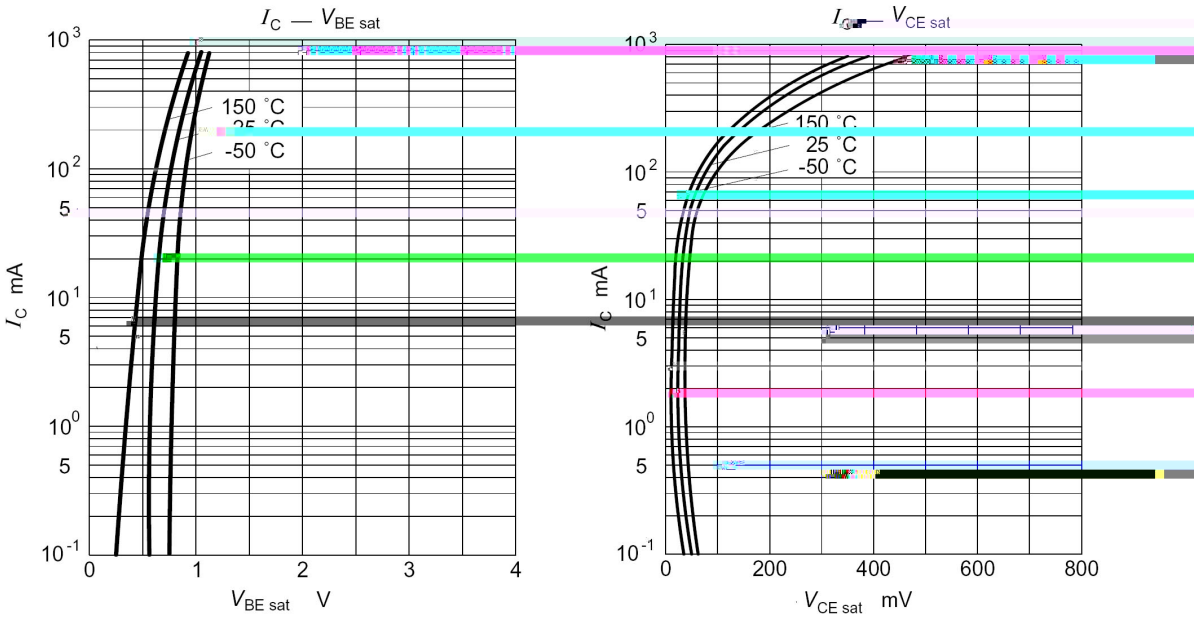
/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	F	G	H
h_{FE} Range	100 250	160 400	250 630
Marking	HDAO	HDAY	HDAG

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	75	V
Collector to Emitter Voltage	V_{CEO}	45	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current(DC)	I_C	800	mA
Peak Collector Current	I_{CM}	1.0	A
Peak Base Current	I_B	100	mA
Collector Power Dissipation	P_C	330	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

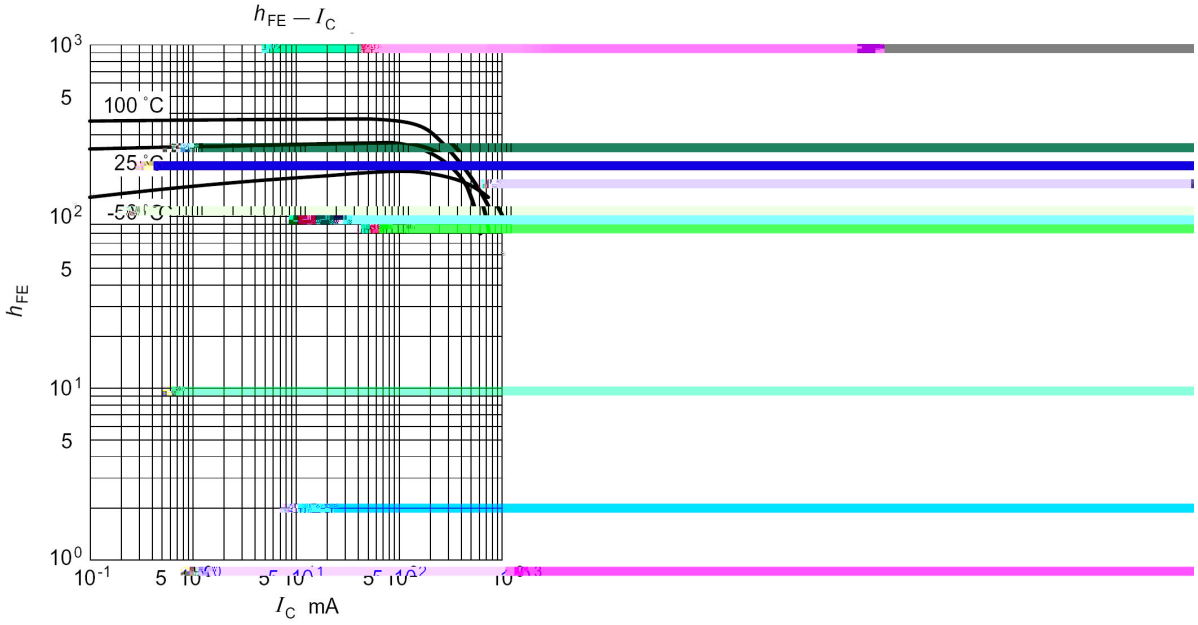
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=10μA	75			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_{CEO}=10mA	45			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_{EBO}=10μA	5.0			V
Collector-Emitter Cut-off Current	I_{CES}	V_{CB}=45 V			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	V_{EB}=4.0V			0.1	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=1.0V I_C=100mA	100		630	
	$h_{FE(2)}$	V_{CE}=1.0V I_C=10mA	75			
	$h_{FE(3)}$	V_{CE}=2.0V I_C=500mA	35			
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	I_C=100mA I_B=10mA			0.3	V
	$V_{CE(sat)(2)}$	I_C=500mA I_B=50mA			0.7	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=500mA I_B=50mA			2.0	V

/ Electrical Characteristic Curve

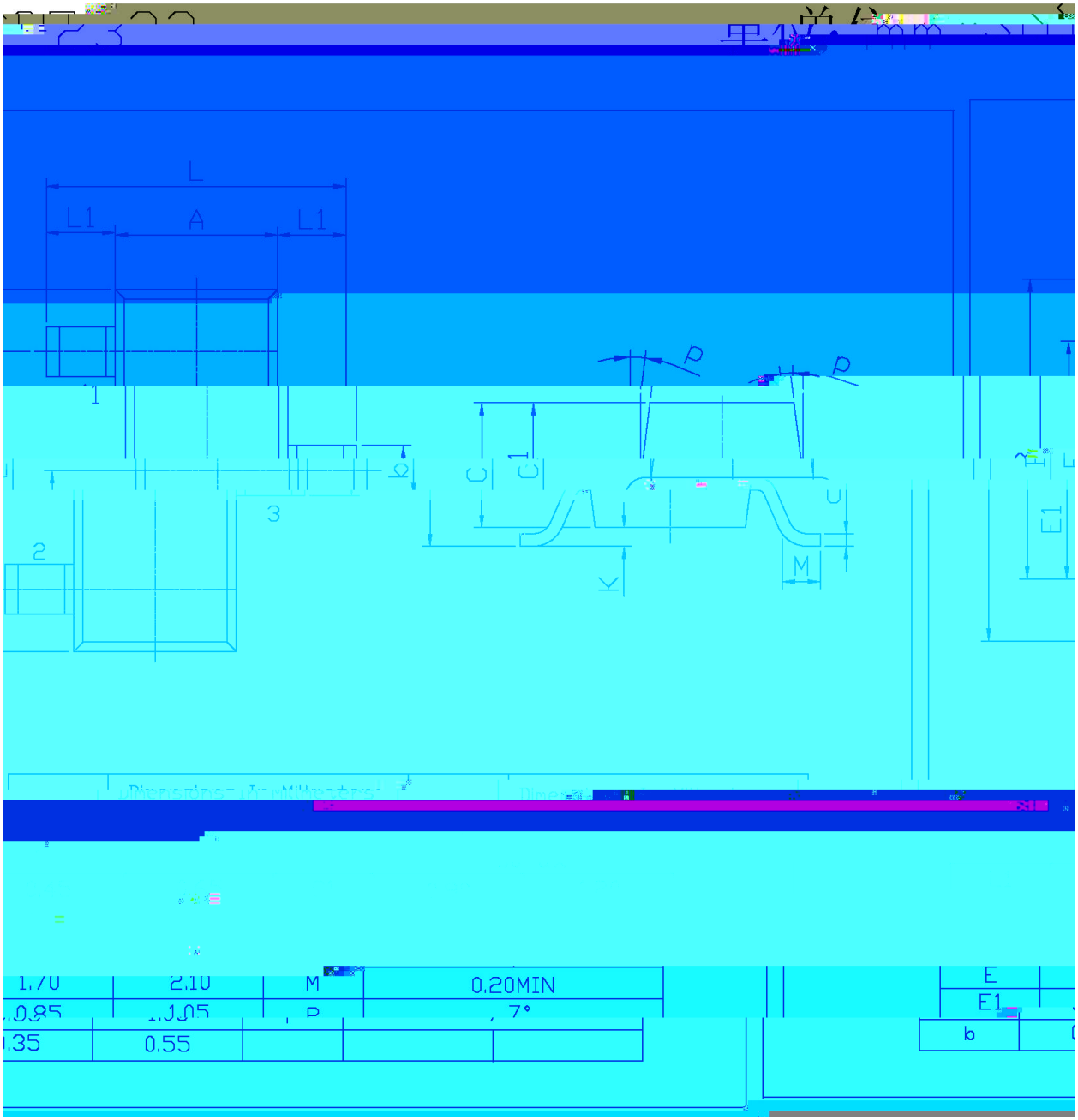


DC current gain $h_{FE} = f(I_C)$

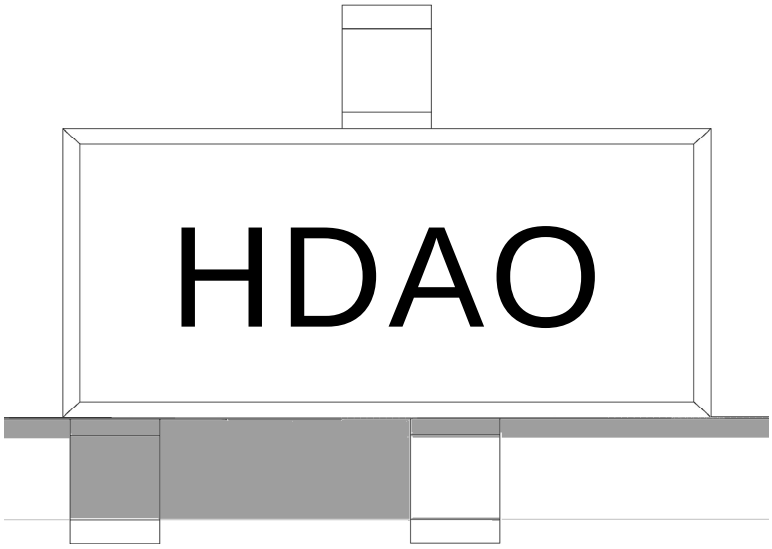
V_{CE} = 1V



/ Package Dimensions



/ Marking Instructions



H

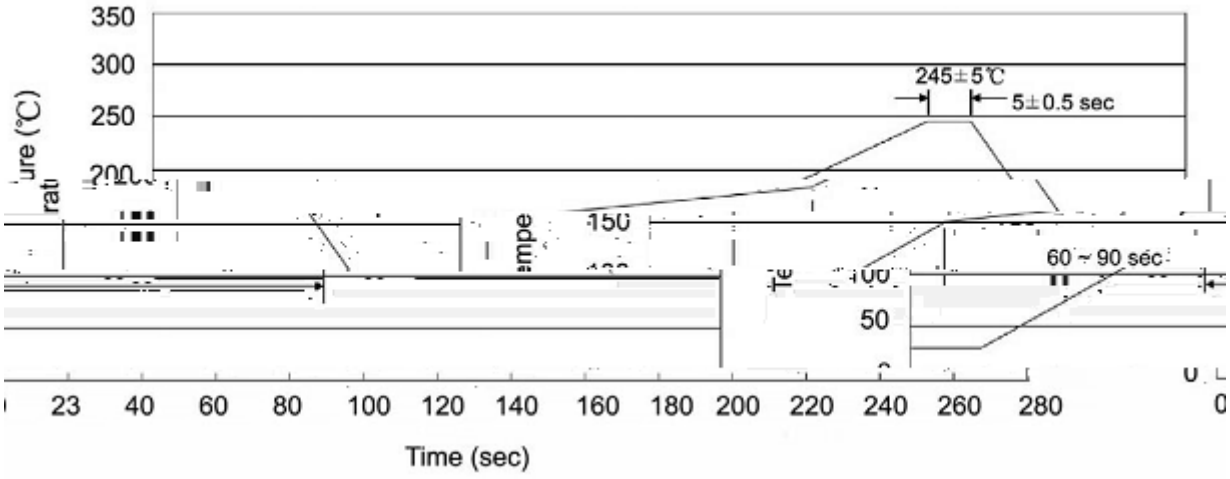
DAO

Note:

H: Company Code

DAO: Product Type Code

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



Note:

1 25 150 60 90sec;
2 245±5 5±0.5sec;
3 2 10 /sec.

1.Preheating:25~150 , Time:60~90sec.
2.Peak Temp.:245±5 , Duration:5±0.5sec.
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