

/ Descriptions

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

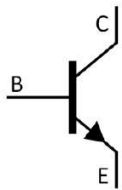
/ Features

h_{FE} , 2SB624
High h_{FE} , complementary pair with 2SB624.

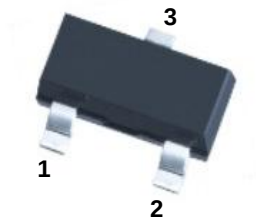
/ Applications

Audio frequency amplifier application.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	1	2	3	4	5
h_{FE} Range	110~180	135~220	170~270	200~320	250~400
Marking	HDV1	HDV2	HDV3	HDV4	HDV5

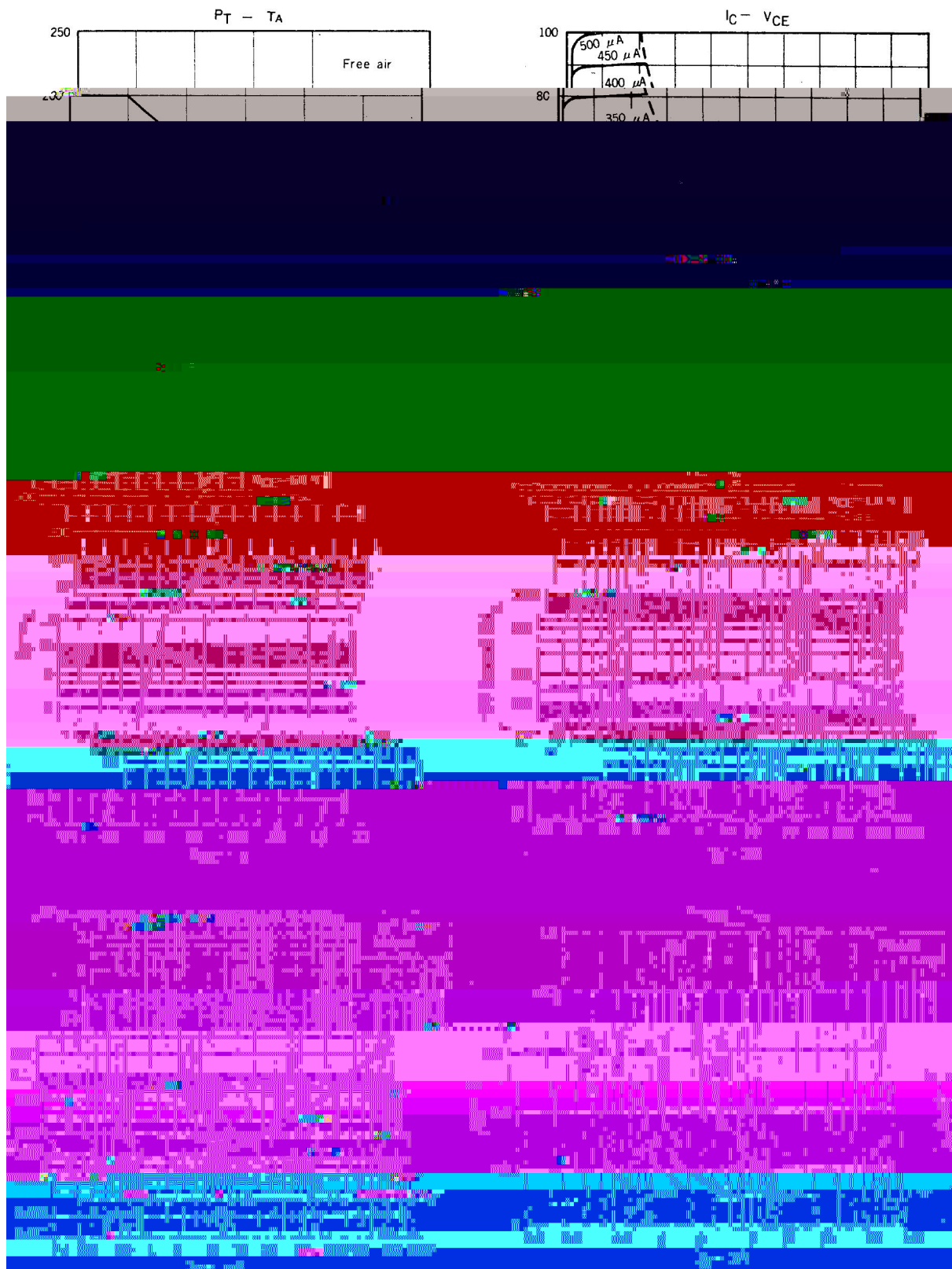
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	700	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

/ Electrical Characteristics(Ta=25)

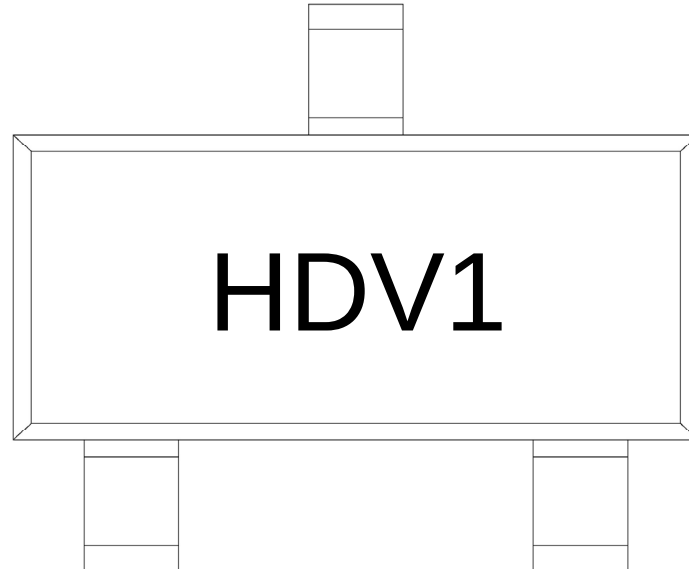
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$ $I_E=0$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1.0V$ $I_C=100mA$	110	200	400	
	$h_{FE(2)}$	$V_{CE}=1.0V$ $I_C=700mA$	50			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=700mA$ $I_B=70mA$		0.22	0.60	V
Base to Emitter Saturation Voltage	V_{BE}	$V_{CE}=6.0V$ $I_C=10mA$	0.60	0.64	0.70	V
Transition Frequency	f_T	$V_{CE}=6.0V$ $I_C=10mA$		170		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=6.0V$ $I_E=0$ $f=10MHz$		12		pF

/ Electrical Characteristic Curve



2SD596

/ Marking Instructions



H

DV

1: h_{FE}

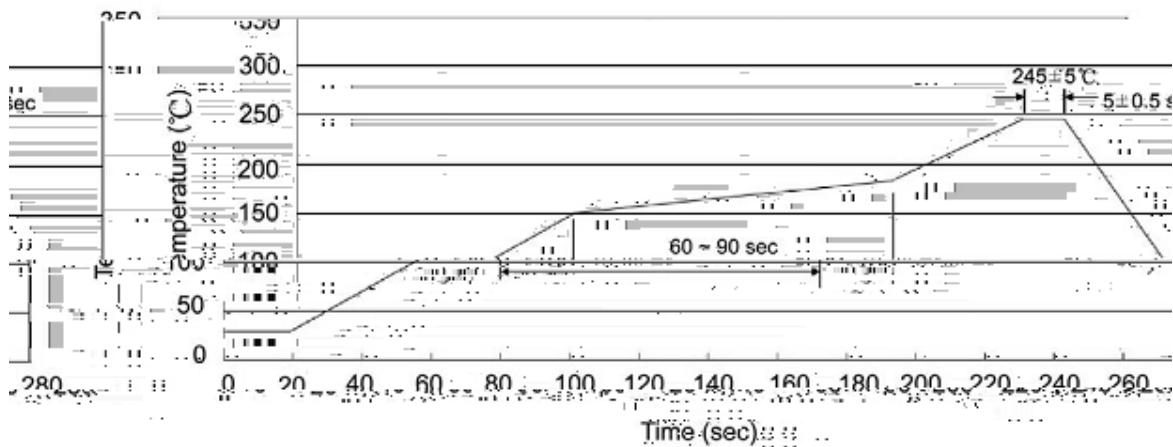
Note:

H: Company Code

DV: Product Type Code

1: h_{FE} Classifications Symbol Code

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



Note:

- | | | | | | |
|---|-------|-----|-----------|--------|---|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245±5 | | 5±0.5sec; | | 2.Peak Temp.:245±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	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" x8	180×120×180	39×385×205

/ **Notices**