

**DESCRIPTION**

The 2SB624-V1, 2SB624-V2, 2SB624-V3, 2SB624-V4 and 2SB624-V5 are available in the SOT-23 package.

ORDERING INFORMATION

Package Type	Part Number
SOT-23	2SB624-V1
	2SB624-V2
	2SB624-V3
	2SB624-V4
	2SB624-V5
SPQ	3,000pcs/Reel
AiT provides all RoHS Compliant Products	

h_{FE} CLASSIFICATION

Rank	Range
V1	110 ~ 180
V2	135 ~ 220
V3	170 ~ 270
V4	200 ~ 320
V5	250 ~ 400

ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise specified.

V _{CBO} , Collector-Base Voltage	-30 V
V _{CEO} , Collector-Emitter Voltage	-25 V
V _{EBO} , Emitter-Base Voltage	-5 V
I _c , Collector Current-Continuous	-700 mA
P _c , Collector Dissipation	200 mW
T _J , Junction Temperature	150 °C
T _{stg} , Storage Temperature	-55 ~ 150 °C

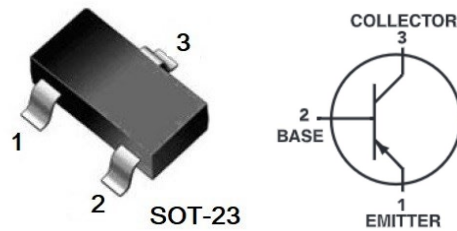
Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

FEATURE

- Micro package.
- High DC current gain.
h_{FE} : 200TYP (V_{CE}=-1.0 V, I_C =-100mA)
- Complimentary to 2SD596

APPLICATION

- For switching and amplifier applications.

PIN DESCRIPTION

PIN#	DESCRIPTION
1	Base
2	Emitter
3	Collector



ELECTRICAL CHARACTERISTICS

T_A=25°C unless otherwise specified.

Parameter	Symbols	Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C = -100 μA, I _E = 0	-30	-	-	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C = -1 mA, I _B = 0	-25	-	-	V
Collector-Base Breakdown Voltage	V _{(BR)EBO}	I _E = -100 μA, I _C = 0	-5	-	-	V
Collector Cut-off Current	I _{CBO}	V _{CB} = -30 V, I _E = 0	-	-	-0.1	μA
Emitter Cut-off Current	I _{EBO}	V _{EB} = -5 V, I _C = 0	-	-	-0.1	μA
DC Current Gain	h _{FE}	V _{CE} = -1 V, I _C = -100 mA	110	200	400	-
		V _{CE} = -1 V, I _C = -700 mA	50	-	-	
Collector-Emitter Saturation Voltage	V _{CE (sat)}	I _C = -700 mA, I _B = -70 mA,	-	-	-0.6	V
Base-Emitter Voltage	V _{BE}	V _{CE} = -6 V, I _C = -10 mA,	-0.6	-	-0.8	V
Transition Frequency	f _T	V _{CE} = -6 V, I _E = -10 mA	-	160	-	MHz
Output capacitance	C _{ob}	V _{CB} = -6 V, I _E = 0 f = 1 MHz	-	17	-	pF

TYPICAL CHARACTERISTICS

Fig 1. Static Characteristic

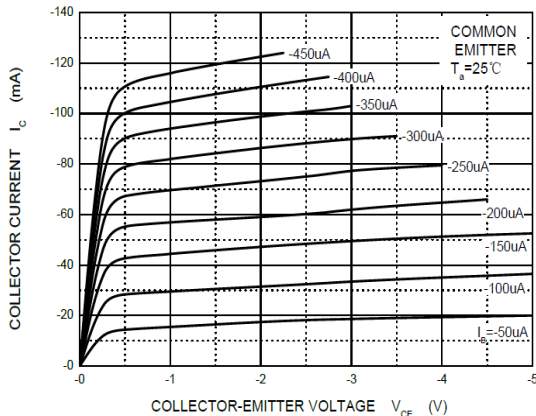


Fig 2. h_{FE} - I_C

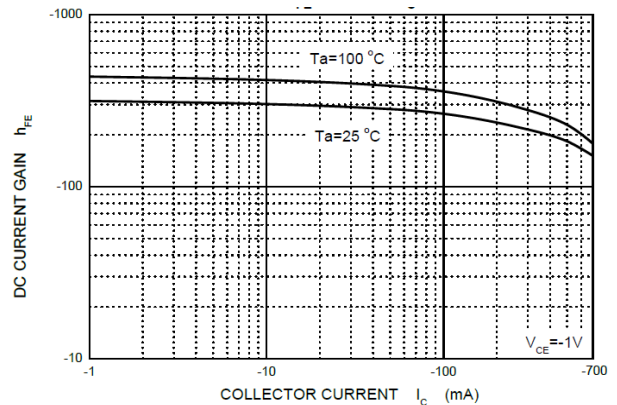




Fig 3. $V_{CE(sat)} - I_c$

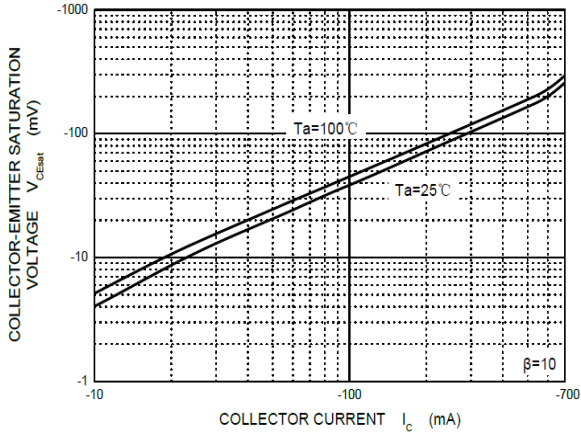


Fig 4. $V_{BE(sat)} - I_c$

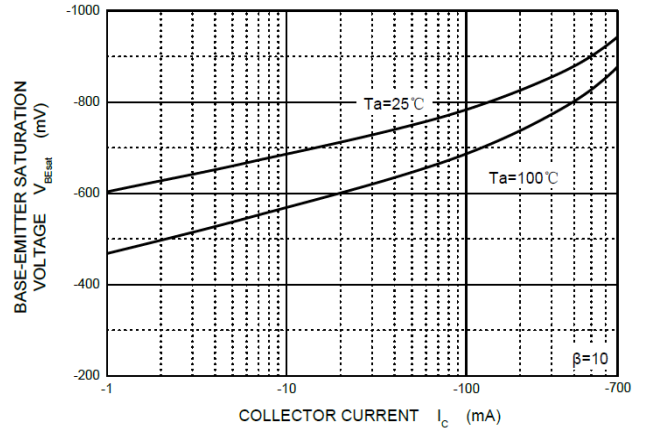


Fig 5. $V_{BE} - I_c$

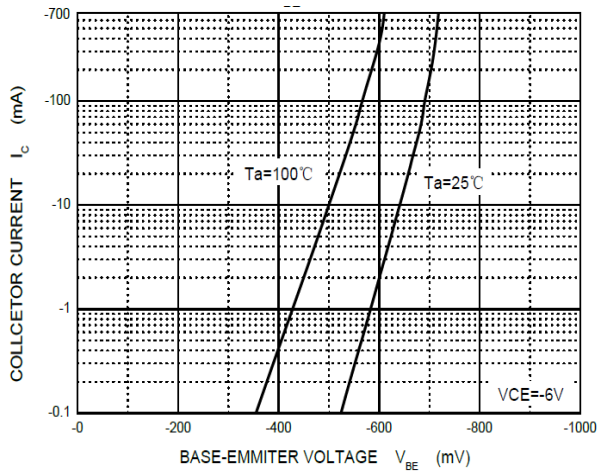


Fig 6. $C_{ob}/C_{ib} - V_{CB}/V_{EB}$

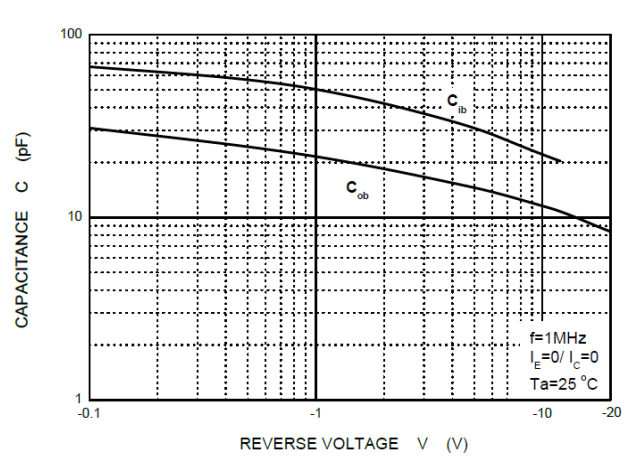


Fig 7. $f_T - I_c$

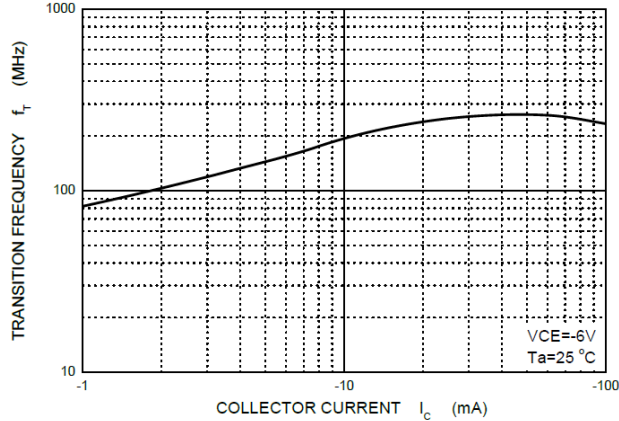
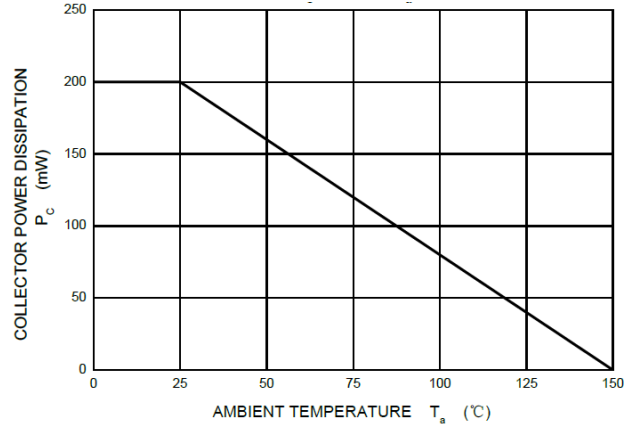


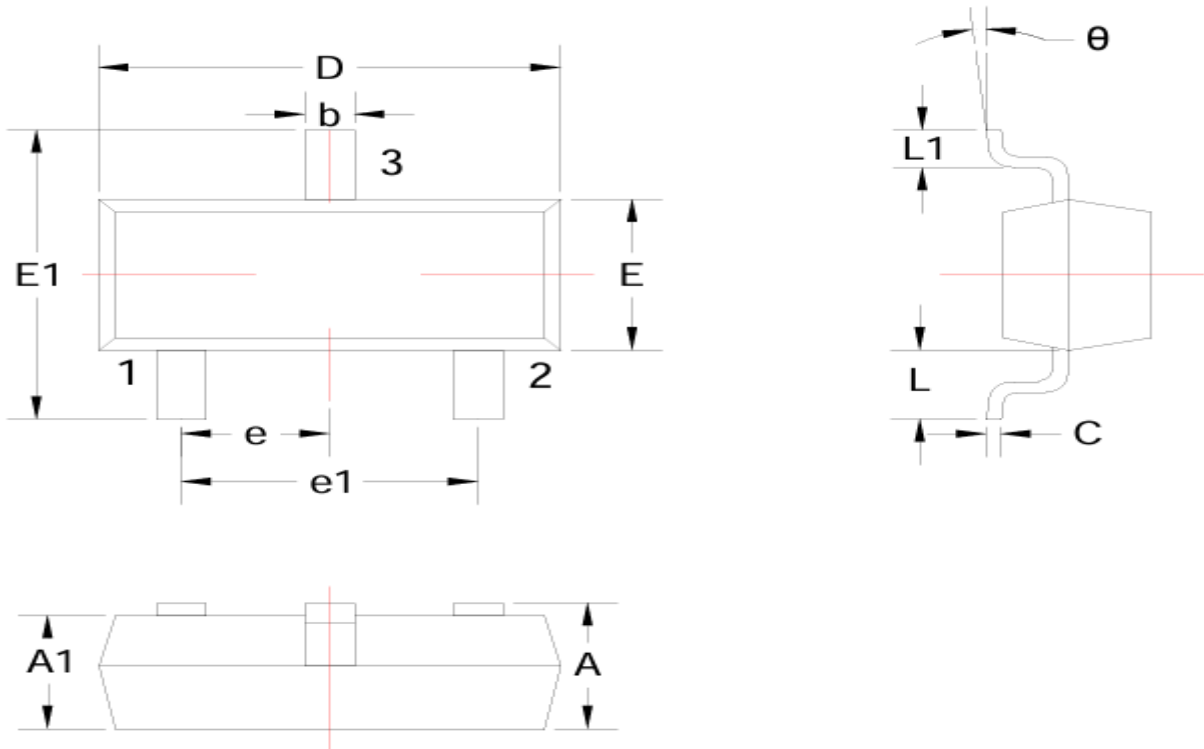
Fig 8. $P_C - T_a$





PACKAGE INFORMATION

Dimension in SOT-23 (Unit: mm)



Symbol	Millimeter	
	Min.	Max.
A	0.900	1.150
A1	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950 TYP.	
e1	1.800	2.000
L	0.550 REF	
L1	0.300	0.500
θ	0°	8°



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