DESCRIPTION

The 2SC1623-L4, 2SC1623-L5, 2SC1623-L6, and 2SC1623-L7 are available in the SOT-23 package.

FEATURES

- High DC current gain: h_{FE} = 200Typ. (V_{CEO}=50V, I_C = 100 mA)
- High Voltage: V_{CEO} = 50V
- NPN silicon epitaxial planar transistor

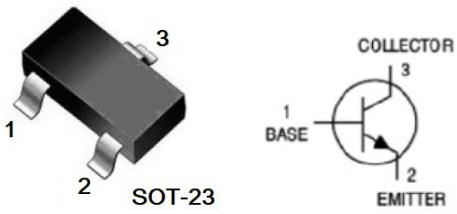
ORDERING INFORMATION

Package Type	Part Number
SOT-23	2SC1623-L4
	2SC1623-L5
	2SC1623-L6
	2SC1623-L7
SPQ	3,000pcs/Reel
AiT provides all RoHS Compliant Products	

APPLICATIONS

- Audio frequency general purpose amplifier.

PIN DESCRIPTION



PIN#	DESCRIPTION
1	Base
2	Emitter
3	Collector

h_{FE} CLASSIFICATION

Rank	Range
L4	90 ~ 180
L5	135 ~ 270
L6	200 ~ 400
L7	300 ~ 600

ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise specified.

V_{CBO}, Collector-Base Voltage	60 V
V_{CEO}, Collector-Emitter Voltage	50 V
V_{EBO}, Emitter-Base Voltage	5 V
I_C, Collector Current-Continuous	100 mA
P_C, Collector Power 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.

ELECTRICAL CHARACTERISTICS

T_A=25℃ unless otherwise specified.

Parameter	Symbols	Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 100 uA, I_E = 0	60	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1 mA, I_B = 0	50	-	-	V
Collector-Base Breakdown Voltage	$V_{(BR)EBO}$	I_C = 100 uA, I_C = 0	5	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} = 60 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} = 6 V, I_C = 1 mA	90	200	600	-
Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_C = 100 mA, I_B = 10 mA,	-	-	0.3	V
Transition Frequency	f_T	V_{CE} = 6 V, I_C = 10 mA	-	250	-	MHz

TYPICAL CHARACTERISTICS

Fig 1. Total power dissipation vs. Ambient temperature

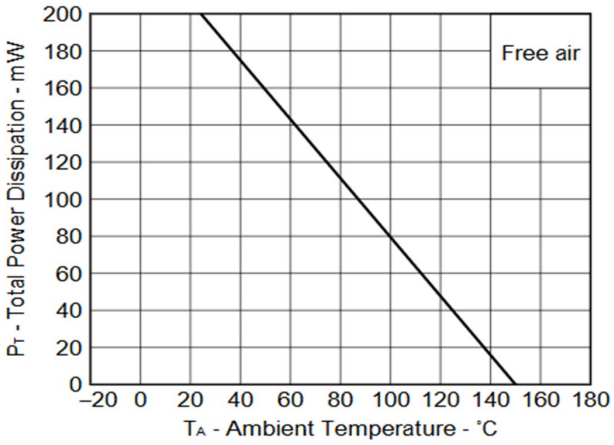


Fig 2. Normalized collector cutoff current vs. Ambient temperature

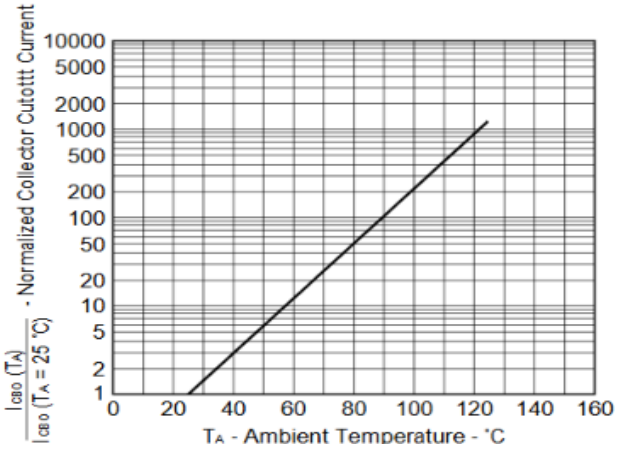


Fig 3. Collector current vs. Collector to emitter voltage

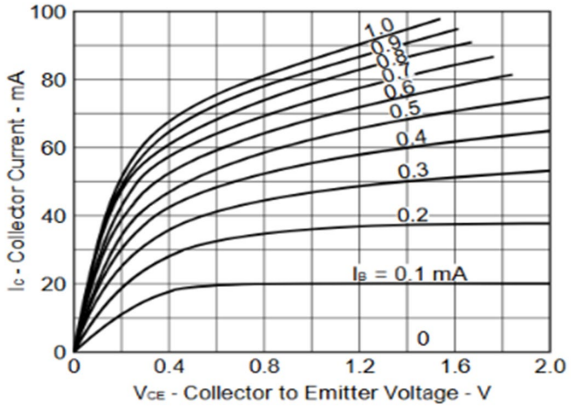


Fig 4. Collector current vs. Collector to emitter voltage

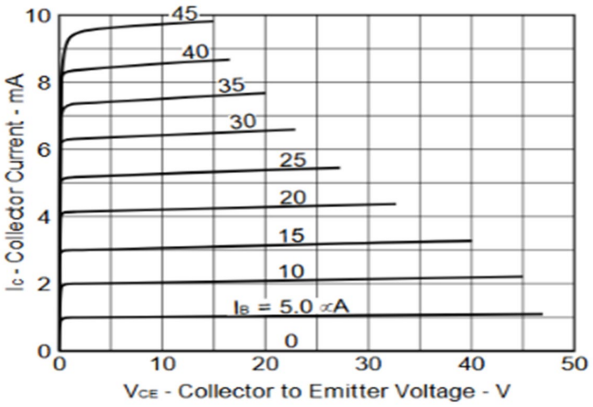


Fig 5. DC current gain vs. Collector current

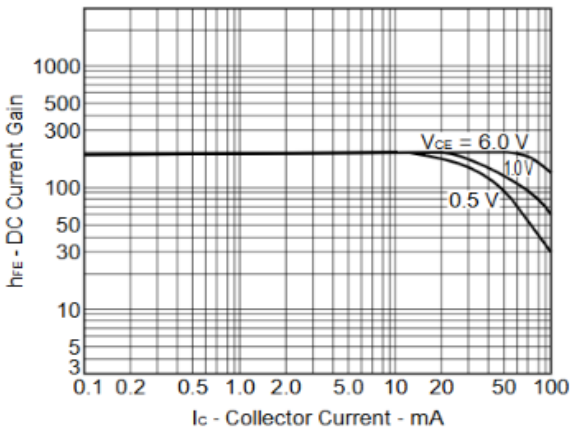
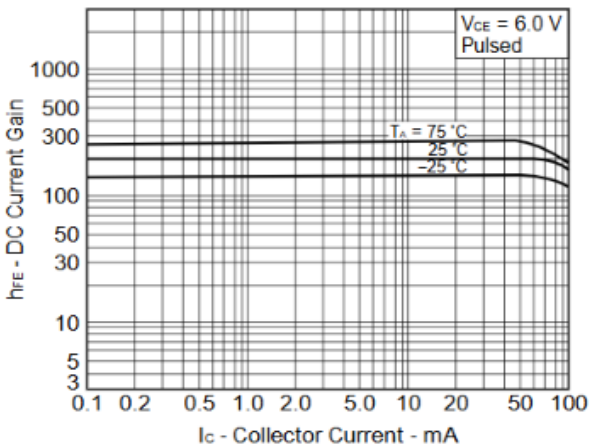
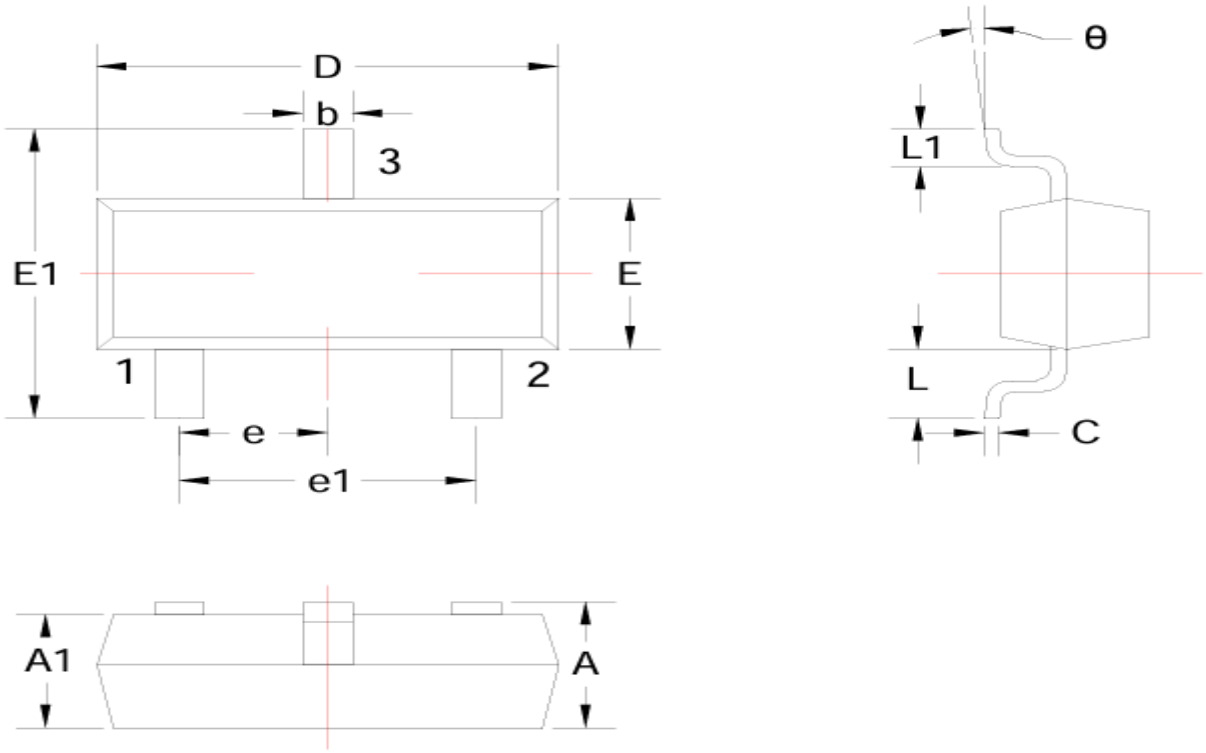


Fig 6. DC current gain vs. Collector current



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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