S9014

S9014
NPN Transistors

General description

SOT-23 Plastic-Encapsulate Transistors

SOT-23

1. BASE
2. EMITTER
3. COLLECTOR

FEATURES

- Complementary to S9015
- Power Dissipation of 200mW
- High Stability and High Reliability

MECHANICAL DATA

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

Marking: J6

Maximum Ratings & Thermal Characteristics

T_A = 25°C unless otherwise noted

Parameters	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter -Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	100	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	℃
Storage Temperature	Tstg	-55-+150	℃
Thermal resistance From junction to ambient	$R_{\theta JA}$	625	℃/W

Electrical Characteristics

T_A = 25°C unless otherwise noted

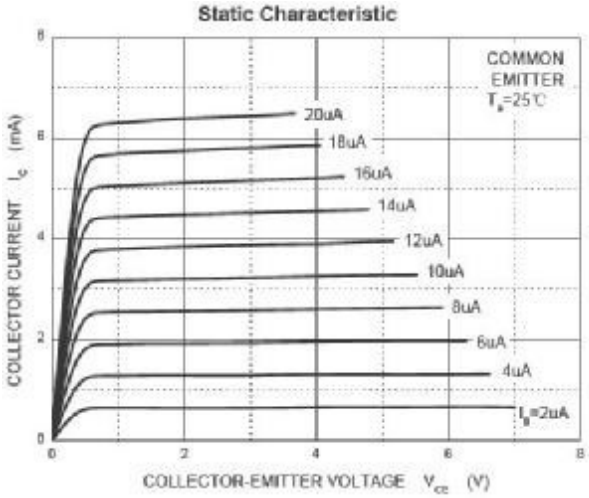
Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100uA, I_E=0	50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=0.1mA, I_B=0	45		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100uA, I_C=0	5		V
Collector cut-off current	I_{CEO}	V_{CE}=20V, I_B=0		100	nA
Collector cut-off current	I_{CBO}	V_{CB}=40V, I_E=0		100	nA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0		100	nA
DC current gain	$h_{FE(1)}$	V_{CE}=1V, I_C=100mA	200	1000	
	$h_{FE(2)}$	V_{CE}=1V, I_C=800mA		0.30	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=800mA, I_B=80mA		1.00	V
Base -emitter saturation voltage	$V_{BE(sat)}$	I_C=800mA, I_B=80mA	150		V
Transition frequency	f_T	V_{CE}=10V, I_C=50mA,f=30MHz	50		MHz

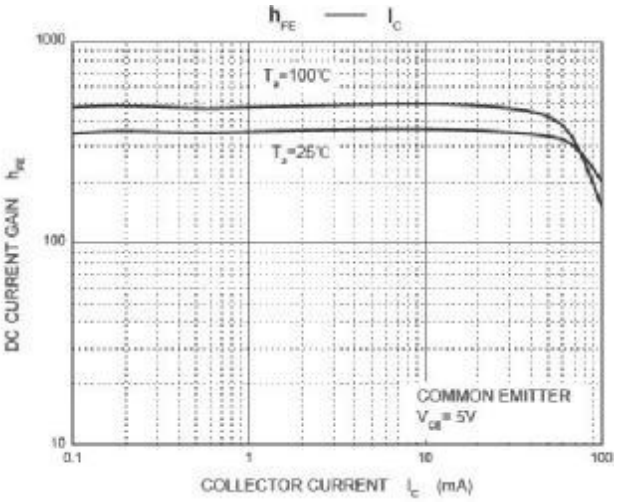
CLASSIFICATION OF $h_{FE(1)}$

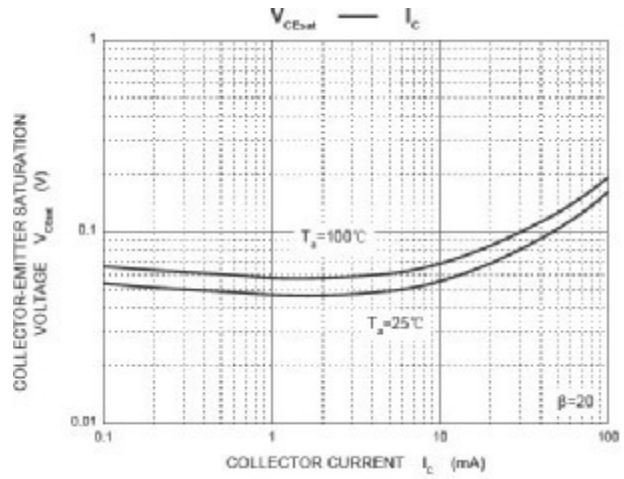
RANK	L	H
RANGE	200-450	450-1000

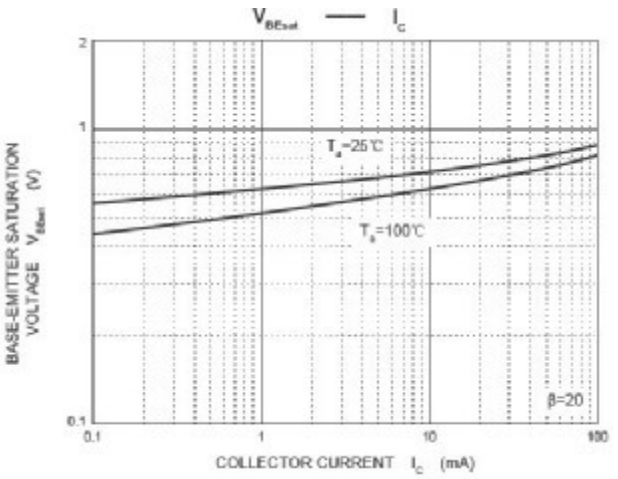
S9014

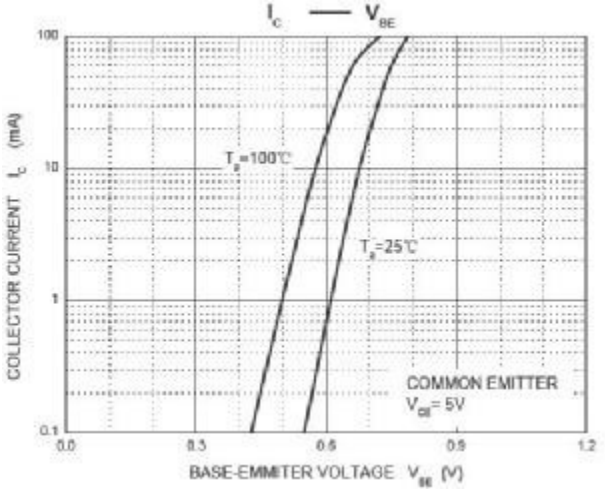
Typical characteristics

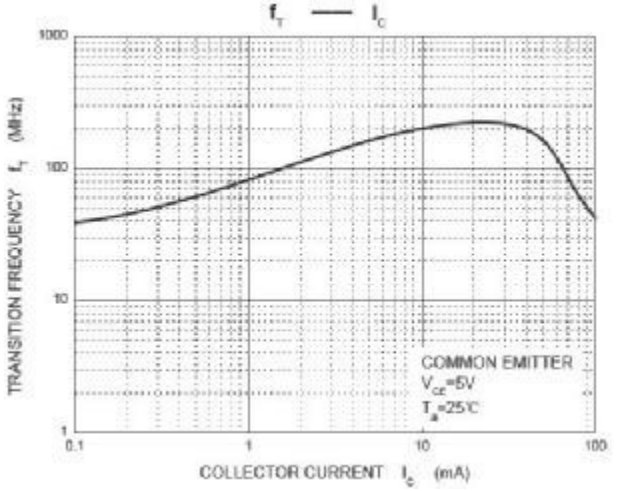


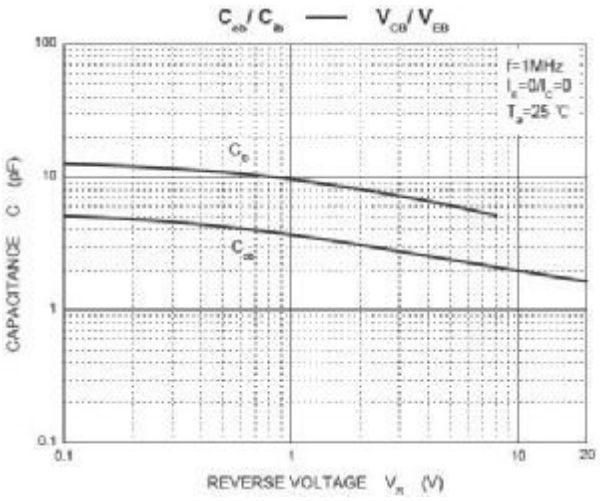


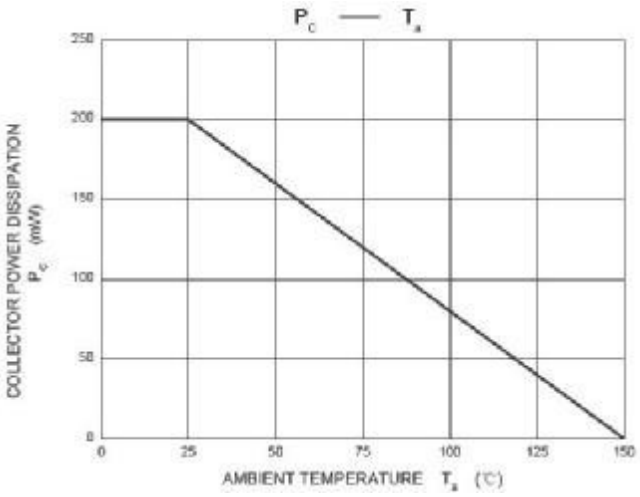




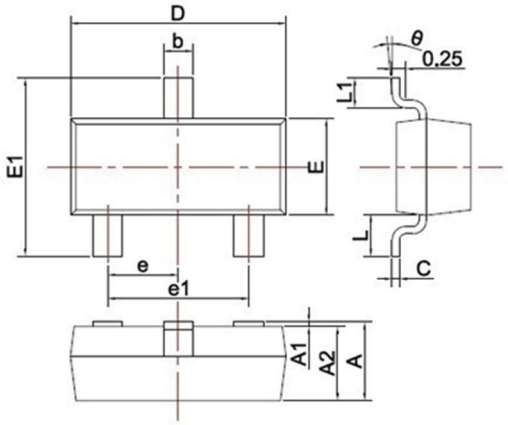








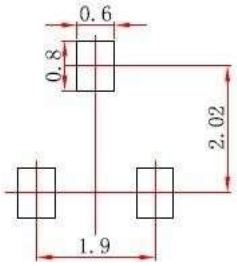
SOT-23 PACKAGE OUTLINE **Plastic surface mounted package**



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	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	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Unit: mm

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



Note:
1.Controlling dimension:In millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

Important Notice and Disclaimer

DOESHARE has used reasonable care in preparing the information included in this document, but DOESHARE does not warrant that such information is error free. DOESHARE assumes no liability whatsoever for any damages incurred by you resulting from errors in or omissions from the information included herein.

DOESHARE no warranty, representation or guarantee regarding the documents, circuits and products specification, DOESHARE reservation rights to make changes for any documents, products, circuits and specifications at any time without notice.

Purchasers are solely responsible for the choice, selection and use of the DOESHARE products and services described herein, and DOESHARE assumes no liability whatsoever relating to the choice, selection or use of the products and services described herein.

No license, express or implied, by implication or otherwise under any intellectual property rights of DOESHARE.

Resale of DOESHARE products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by DOESHARE for the DOESHARE product or service described herein and shall not create or extend in any manner whatsoever, any liability of DOESHARE.