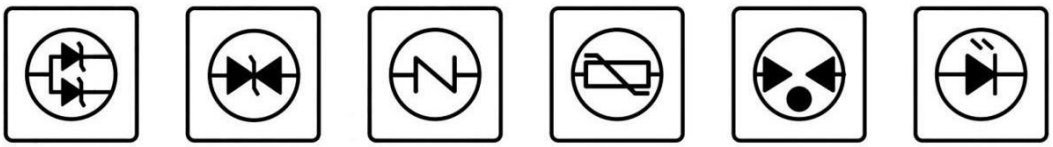
MSKSEMI 美森科
SEMICONDUCTOR



S9012

Product specification

TRANSISTOR (PNP)

FEATURES

- High Collector Current
- Complementary To S9013
- Excellent hFE Linearity

Reference News

PACKAGE OUTLINE	MARKING
 1. BASE 2. EMITTER 3.COLLECTOR	2T1
SOT-23	

MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-25	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-500	mA
P_C	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	416	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

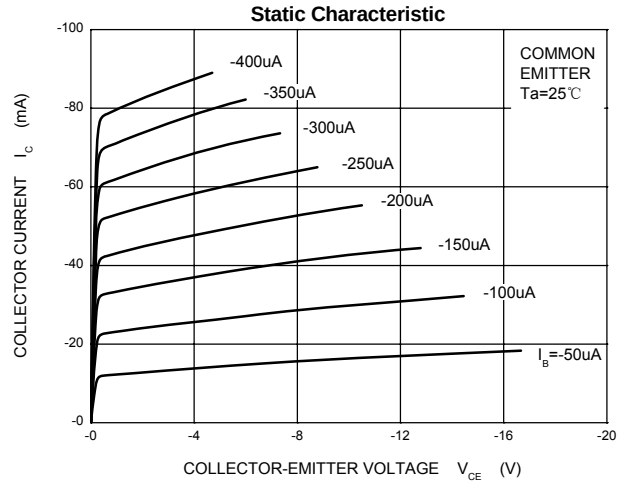
ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

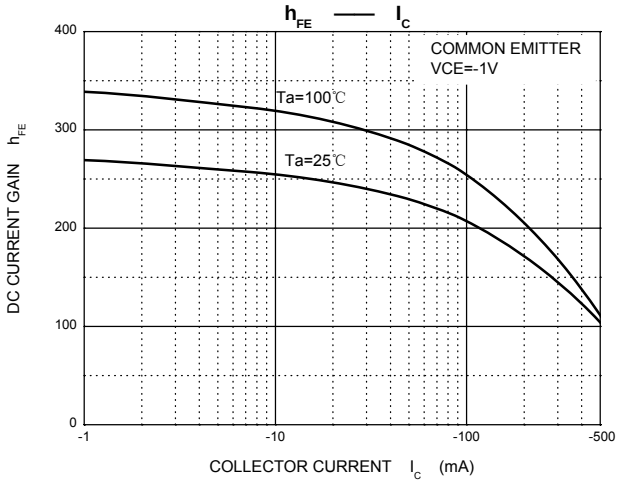
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-0.1mA, I_E=0	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA, I_B=0	-25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-0.1mA, I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-40V, I_E=0			-0.1	uA
Collector cut-off current	I_{CEO}	V_{CE}=-20V, I_B=0			-0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V, I_C=0			-0.1	uA
DC current gain	h_{FE}	V_{CE}=-1V, I_C=-50mA	120		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-500mA, I_B=-50mA			-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-500mA, I_B=-50mA			-1.2	V
Transition frequency	f_T	V_{CE}=-6V,I_C=-20mA, f=30MHz	150			MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz			5	pF

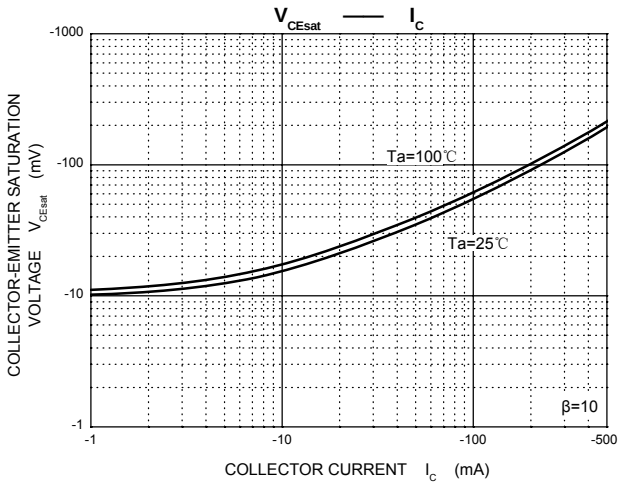
CLASSIFICATION OF $h_{FE(1)}$

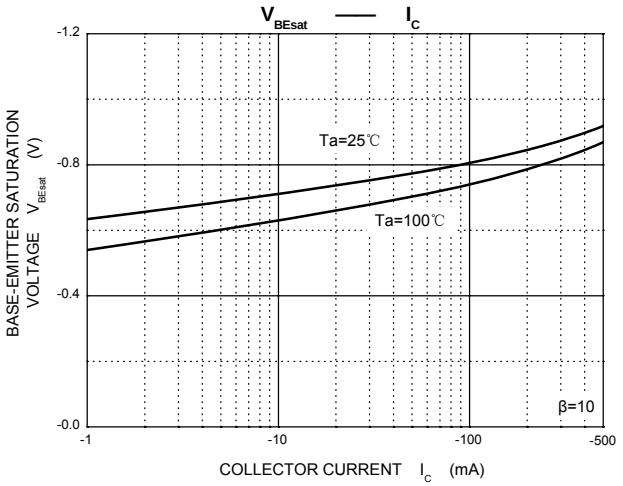
RANK	L	H	J
RANGE	120-200	200-350	300-400

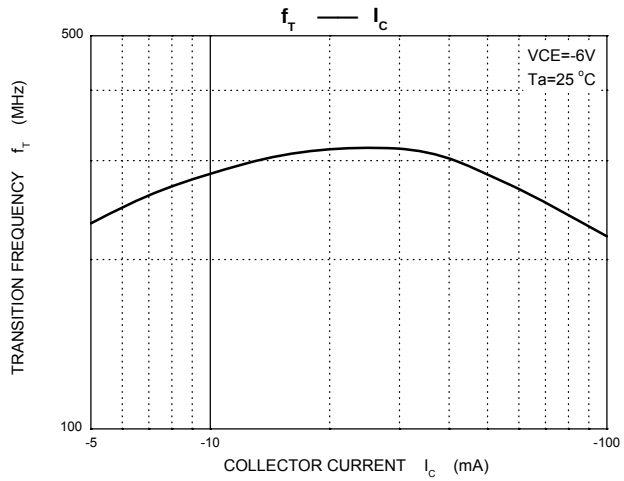
Typical Characteristics

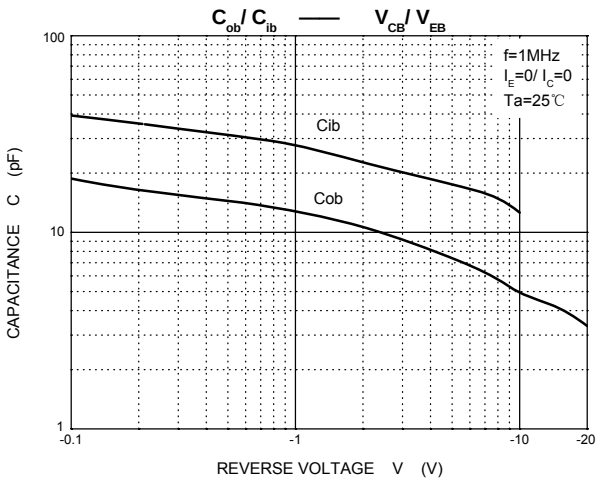


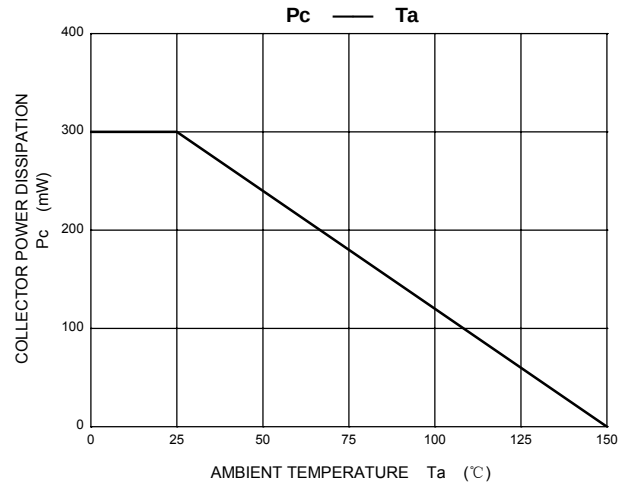




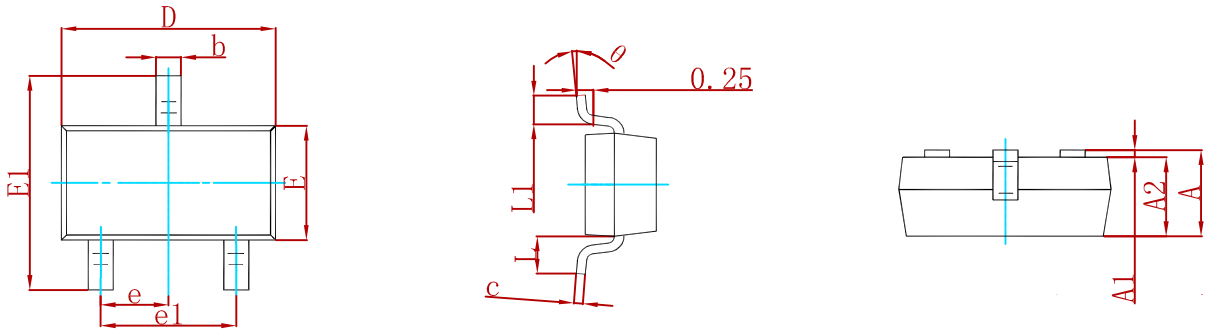






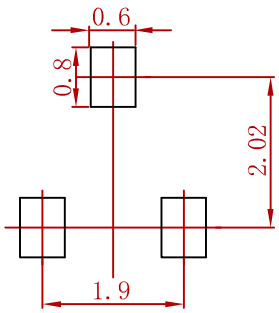


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Suggested Pad Layout



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

REEL SPECIFICATION

P/N	PKG	QTY
S9012	SOT-23	3000

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