BORN SEMICONDUCTOR

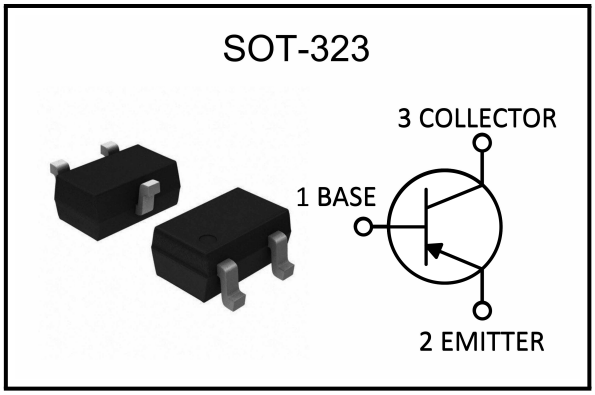
MMST3906

PNP Plastic-Encapsulate Transistor

Features

- V_{CE}=-40V
- I_C=-0.2A
- f_T=250MHZ @V_{CE}=-20V, I_C=-10mA,f=100MHz

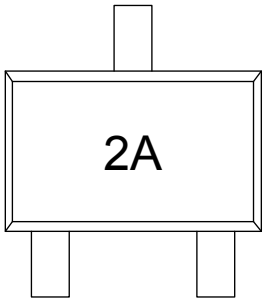
Package



Description

- As complementary type the NPN transistor MMST3904 is recommended
- Epitaxial planar die construction
- SOT-323 Plastic Package.

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
MMST3906	SOT-323	2A	3K	Tape and reel

Absolute Maximum Ratings @T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-0.2	A
P_{tot}	Total Device Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction to Ambient	625	°C/W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature Range	-55 to +150	°C

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Electrical Characteristics (T_A=25°C, unless otherwise specified)

Symbol	Parameter	Test condition	Min.	Typ.	Max.	Unit
V_{CBO}	Collector-base breakdown voltage	I_C=-10μA, I_E=0	-50	–	–	V
V_{CEO}	Collector-emitter breakdown voltage	I_C=-1mA,I_B=0	-40	–	–	
V_{EBO}	Emitter-base breakdown voltage	I_E=-10μA,I_C=0	-5	–	–	
I_{CBO}	Collector cut-off current	V_{CB}=-40V,I_E=0	–	–	-0.1	μA
I_{EBO}	Emitter cut-off current	V_{EB}=-5V, I_C=0	–	–	-0.1	
$h_{FE(1)}$	DC current gain	V_{CE}=-1V,I_C=-10mA	100	–	300	–
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=-50mA,I_B=-5mA	–	–	-0.3	V
f_T	Transition frequency	V_{CE}=-20V,I_C=-10mA ,f=100MHZ	250	–	–	MHZ
t_d	Delay time	V_{CC}=-3V,V_{BE}=-0.5V,	–	–	35	nS
t_r	Rise time	I_C=-10mA,I_{B1}=-I_{B2}=-1mA	–	–	35	nS
t_f	Fall time	V_{CC}=-3V,I_C=-10mA,	–	–	75	nS
t_s	Storage time	I_{B1}=-I_{B2}=-1mA	–	–	225	nS

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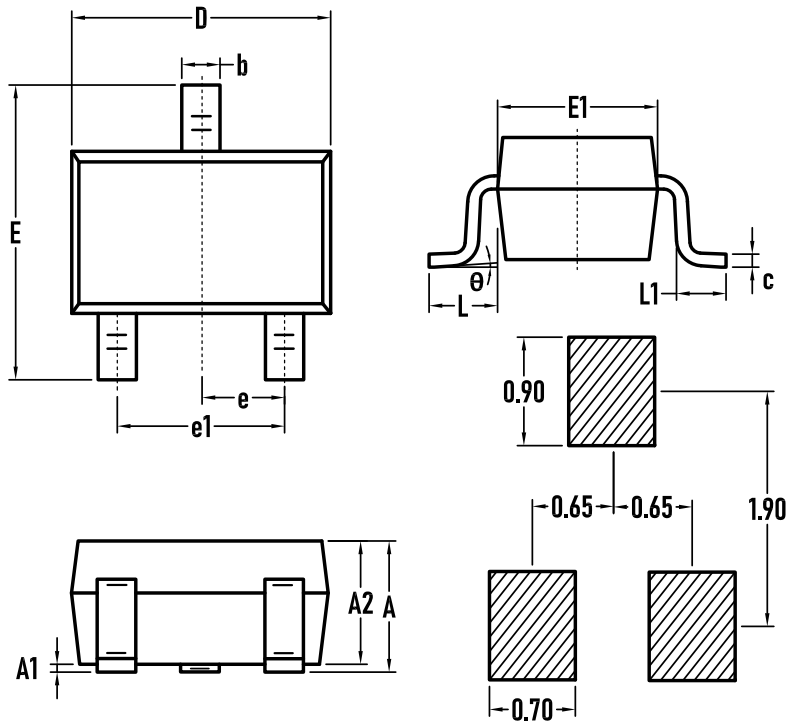
Outline Drawing - SOT-323



SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.90	1.00	1.10
A1	0.00	0.05	0.10
A2	0.90	0.95	1.00
b	0.20	0.30	0.40
c	0.08	0.12	0.15
D	2.00	2.10	2.20
E	2.15	2.30	2.45
E1	1.15	1.25	1.35
e		0.650Typ.	
e1	1.20	1.30	1.40
L1	0.26	0.36	0.46
L		0.525REF	
θ	0°	4°	8°

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