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SEMICONDUCTOR



ESD



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GDT



PLED

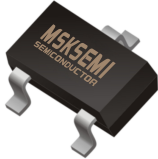

M28S

Product specification

FEATURES

- Excellent h_{FE} Linearity
- High DC Current Gain

Reference News

PACKAGE OUTLINE	Foot position analysis	Marking
	<ol style="list-style-type: none"> 1. BASE 2. EMITTER 3. COLLECTOR 	
SOT-23		

CLASSIFICATION OF $h_{FE}(2)$

RANK	B	C	D
RANGE	300 – 550	500 – 700	650 – 1000

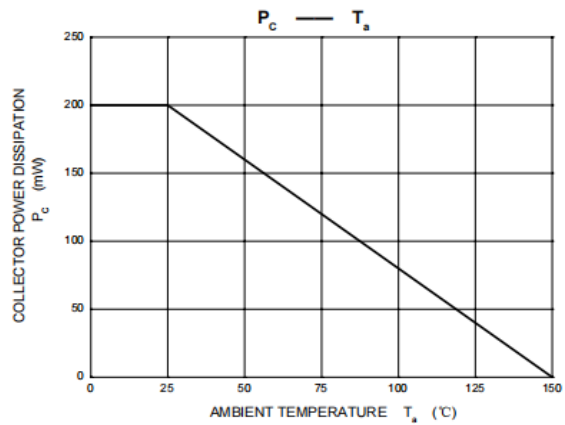
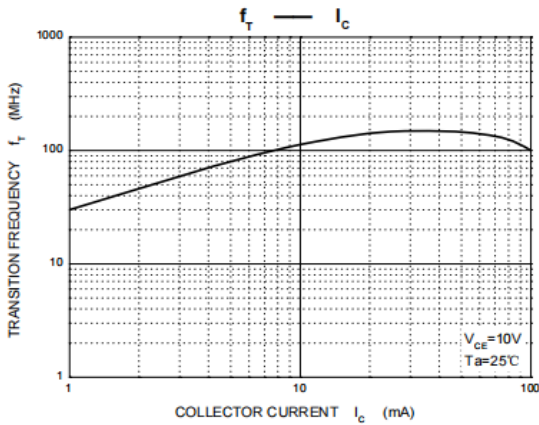
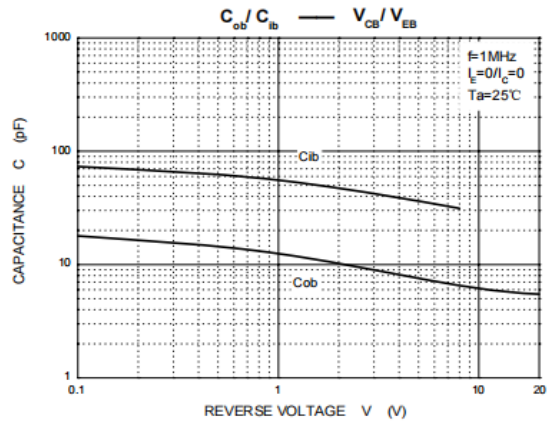
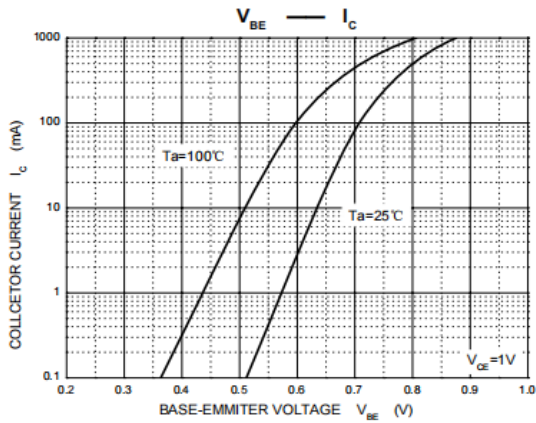
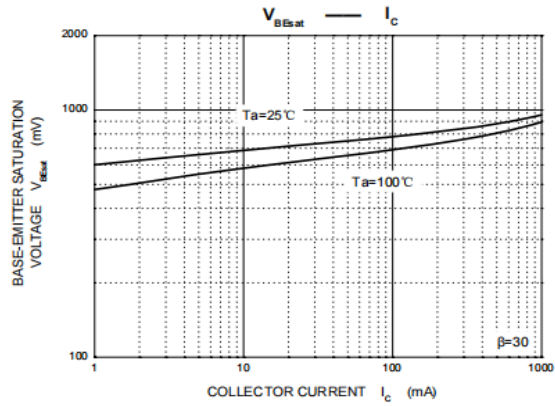
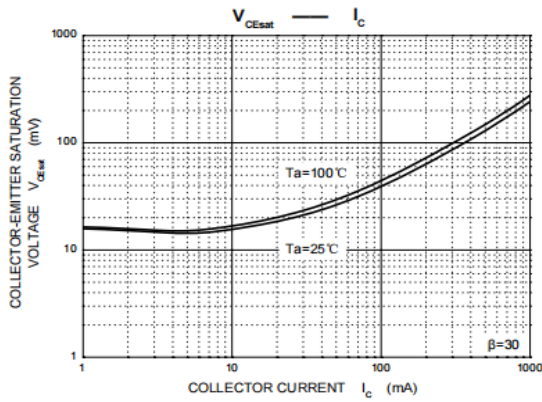
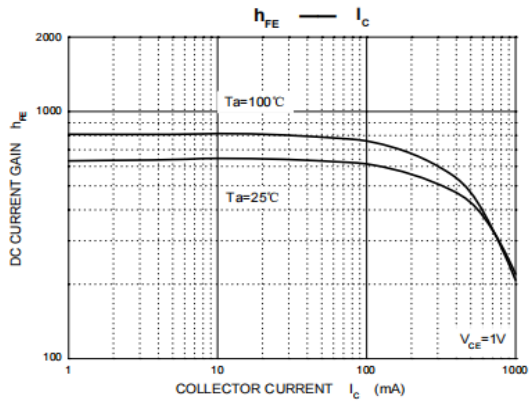
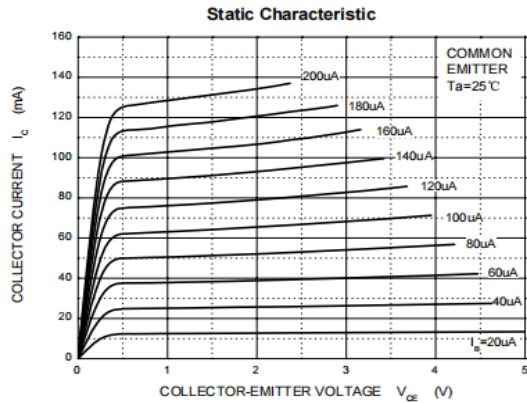
MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	40	V
V _{CEO}	Collector-Emitter Voltage	20	V
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current	1	A
P _C	Collector Power Dissipation	200	W
R _{θJA}	Thermal Resistance From Junction To Ambient	625	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

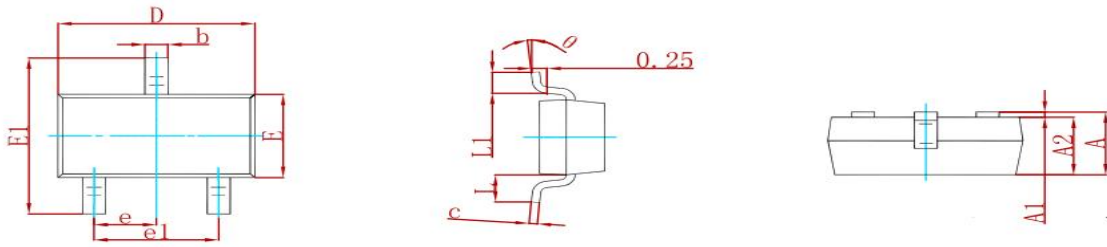
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

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	20			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =0.1mA, I _C =0	6			V
Collector cut-off current	I _{CBO}	V _{CB} =35V, I _E =0			0.1	A
Collector cut-off current	I _{CEO}	V _{CE} =20V, I _B =0			5	A
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			0.1	A
DC current gain	FE(1)	V _{CE} =1V, I _C =1mA	290			
	FE(2)	V _{CE} =1V, I _C =100mA	300		1000	
	FE(3)	V _{CE} =1V, I _C =300mA	300			
	FE(4)	V _{CE} =1V, I _C =500mA	300			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =600mA, I _B =20mA			0.55	V
Transition frequency	f _T	V _{CE} =10V, I _E =50mA, f=1MHz	100			MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		9		pF

Typical Characteristics

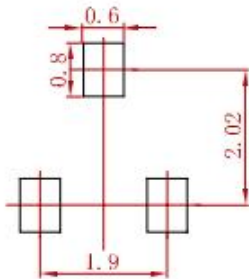


PACKAGE MECHANICAL DATA



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
M28S	SOT-23	3000

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