

SOT-23 Plastic-Encapsulate Transistors

Features

- Complementary to M8050.
- 200mW; Power Dissipation of 200mW
- High Stability and High Reliability

Mechanical Data

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



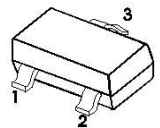
RoHS
COMPLIANT



Marking: Y21

SOT-23

Pin definition



1. BASE
2. EMITTER
3. COLLECTOR

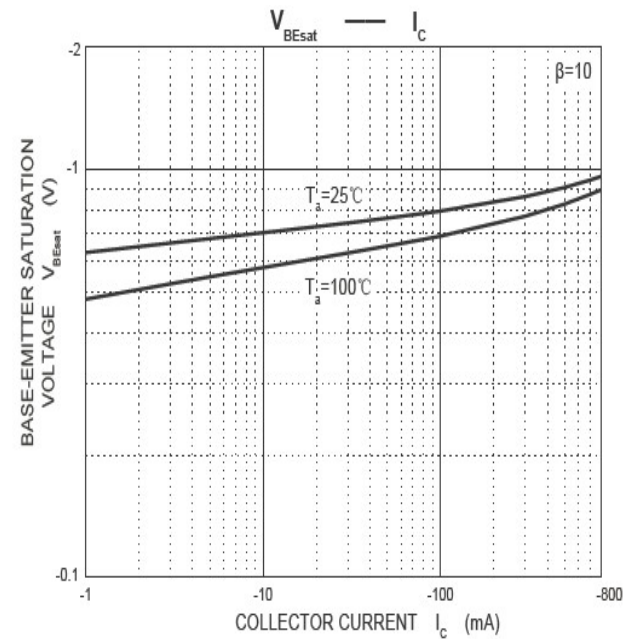
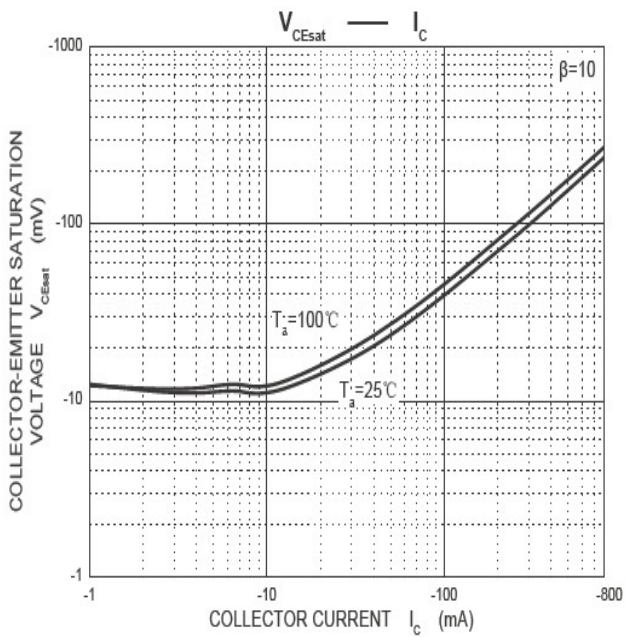
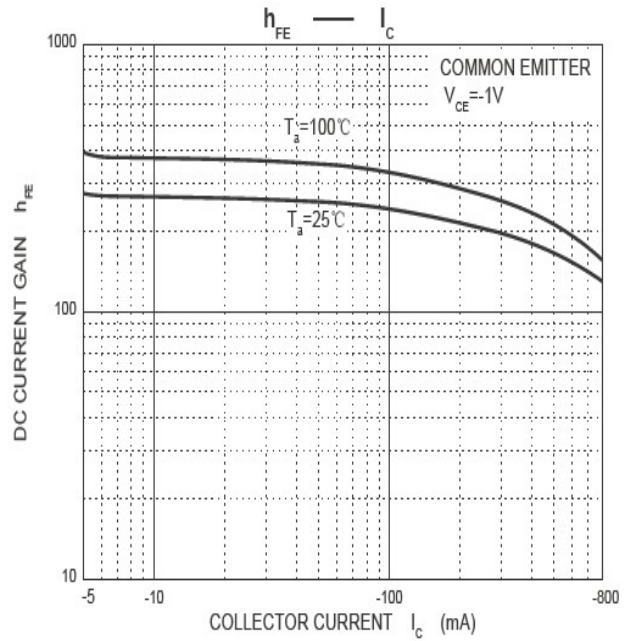
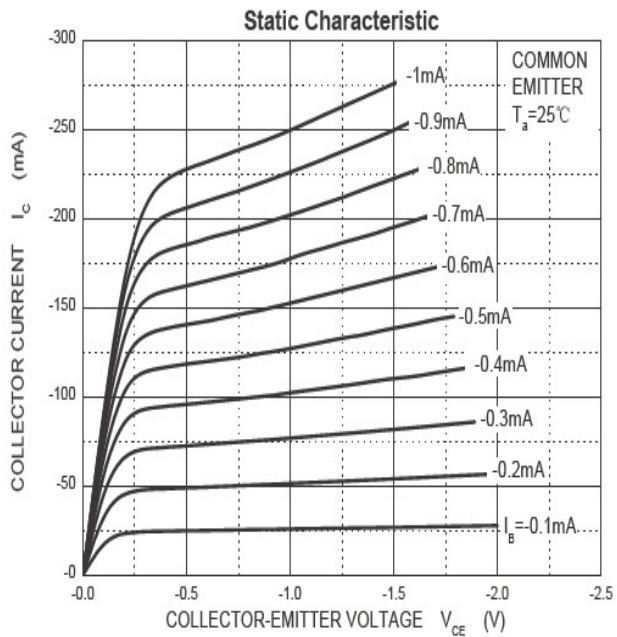
Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-40	V
Collector-Emitter Voltage	V _{CEO}	-25	V
Emitter -Base Voltage	V _{EBO}	-6	V
Collector Current-Continuous	I _C	-800	mA
Collector Power Dissipation	P _C	200	mW
Operating junction temperature range	T _J	150	°C
Storage temperature range	T _{STG}	-55-+150	°C
Thermal Resistance from Junction to Ambient	R _{θJA}	625	°C/W

Electrical Specifications (T _A =25°C unless otherwise noted)					
Parameter	Symbol	Test Conditions	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	I _C =-100μA, I _E =0	-40		V
Collector-emitter breakdown voltage	V(BR)CEO	I _C =-1mA, I _B =0	-25		
Emitter-base breakdown voltage	V(BR)EBO	I _E =-100μA, I _C =0	-6		
Collector cut-off current	I _{CBO}	V _{CB} =-35V, I _E =0		-100	nA
Collector cut-off current	I _{CEO}	V _{CE} =-20V, I _B =0		-100	
DC current gain	hFE(1)	V _{CE} =-1V, I _C =-5mA	45		
	hFE(2)	V _{CE} =-1V, I _C =-100mA	85	400	
	hFE(3)	V _{CE} =-1V, I _C =-800mA	40		
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-800mA, I _B =-80mA		-0.50	V
Collector-emitter saturation voltage	V _{BE(sat)}	I _C =-800mA, I _B =-80mA		-1.20	
Transition frequency	f _T	V _{CE} =-6V, I _C =-20mA, f=30MHz	150		MHz

Classification OF _{hFE(2)}		
RANK	L	H
RANGE	80-300	300-400

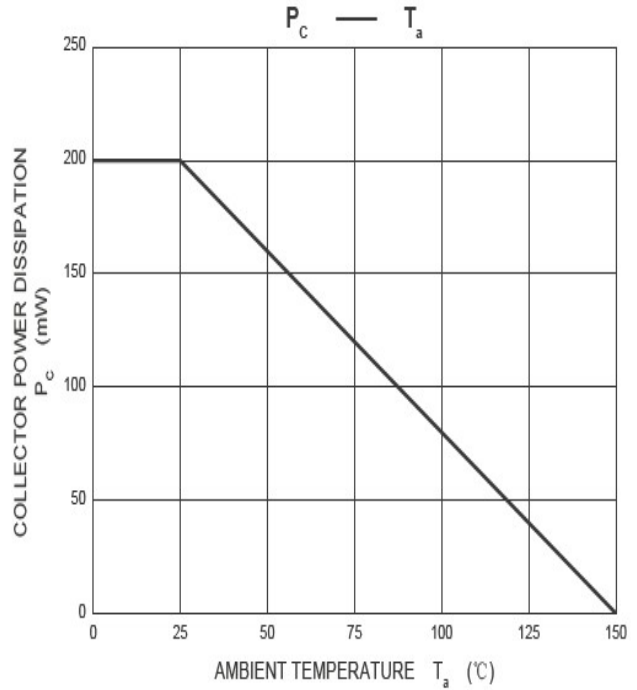
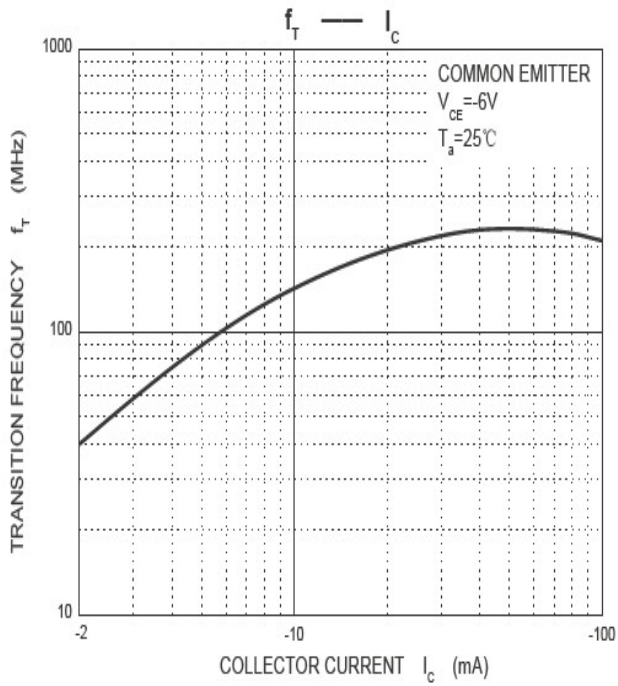
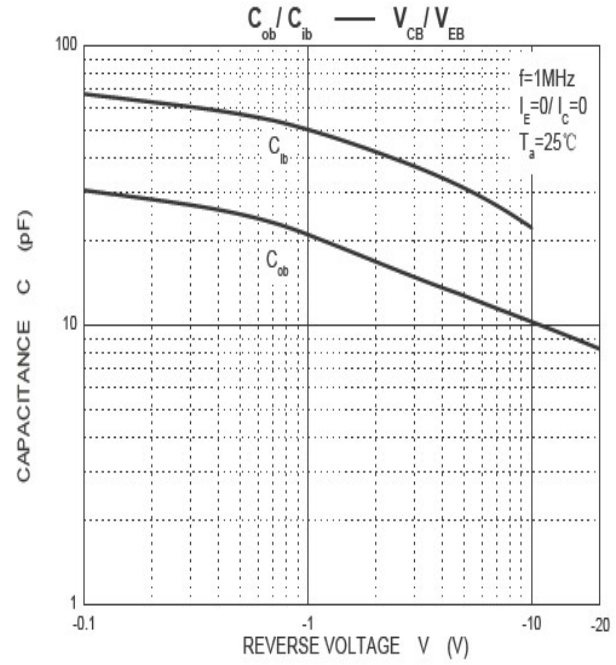
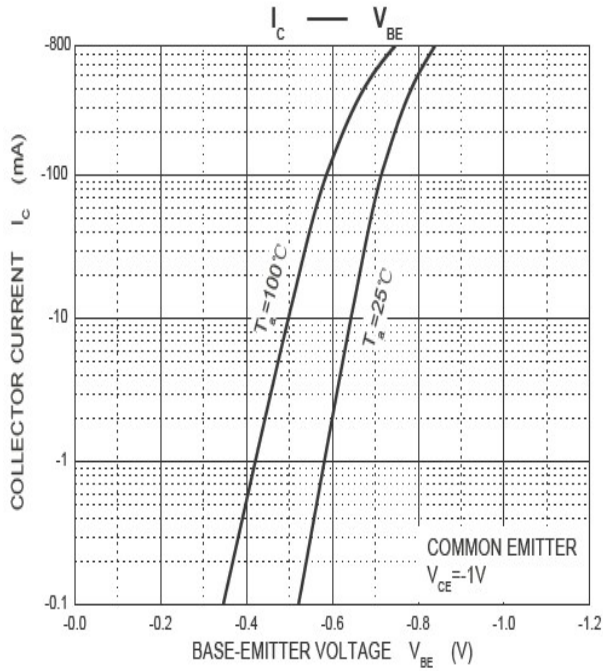
Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

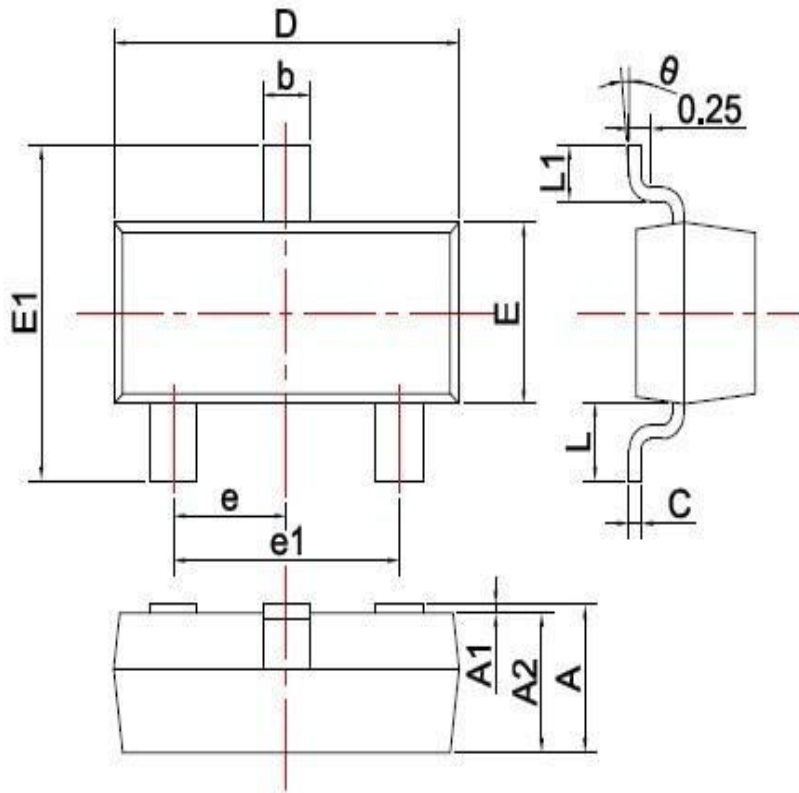


Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)



Package Outline Dimensions
millimeters



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°

Revision History

Document Version	Date of release	Description of changes
Rev.A	2017.06.13	First issue

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