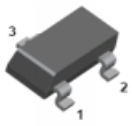
SOT-23 Plastic-Encapsulate Transistors

Features

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

RoHS
COMPLIANT



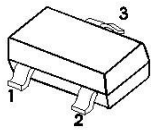
SOT-23

Mechanical Data

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

Marking: Y21 **SOT-23**

Pin definition



1. BASE
2. EMITTER
3. COLLECTOR

Maximum Ratings & Electrical Characteristics(T_A=25℃ 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	TJ	150	°C
Storage temperature range	T_{STG}	-55-+150	°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	℃/W

Electrical Specifications(T_A=25℃ unless otherwise noted)

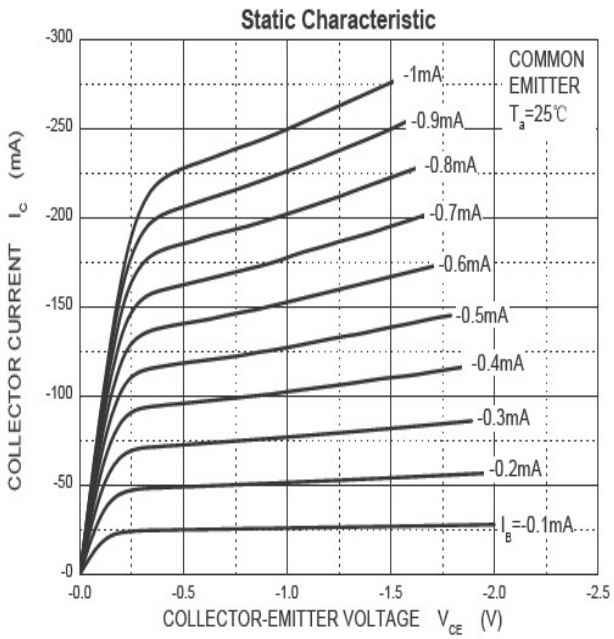
Parameter	Symbol	Test Conditions	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	I_C=-100uA, I_E=0	-40		V
Collector-emitter breakdown voltage	V(BR)CEO	I_C=-1mA, I_B=0	-25		
Emitter-base breakdown voltage	V(BR)EBO	I_E=-100uA, I_C=0	-6		
Collector cut-off current	ICBO	V_{CB}=-35V, I_E=0		-100	nA
Collector cut-off current	ICEO	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	VCE(sat)	I_C=-800mA, I_B=-80mA		-0.50	V
Collector-emitter saturation voltage	VBE(sat)	I_C=-800mA, I_B=-80mA		-1.20	
Transition frequency	fT	V_{CE}=-6V, I_C=-20mA,f=30MHz	150		MHz

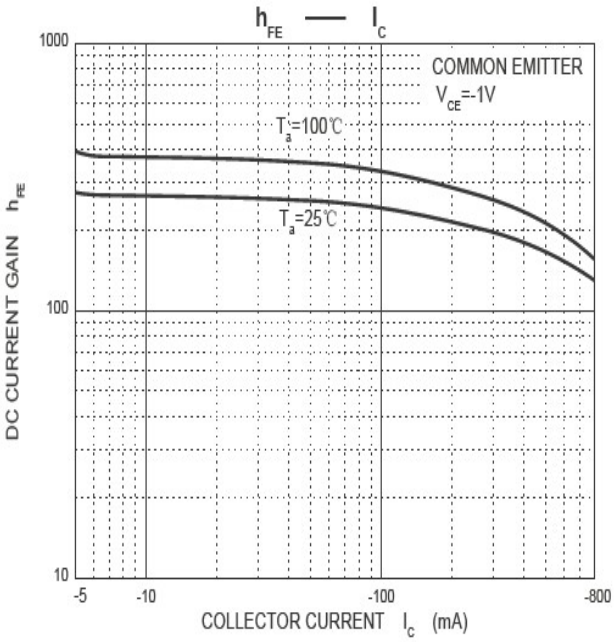
Classification OF $h_{FE(2)}$

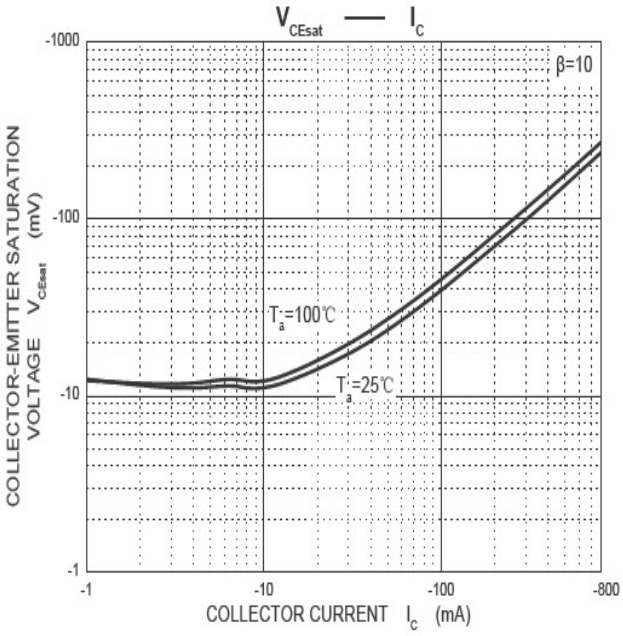
RANK	L	H
RANGE	80-300	300-400

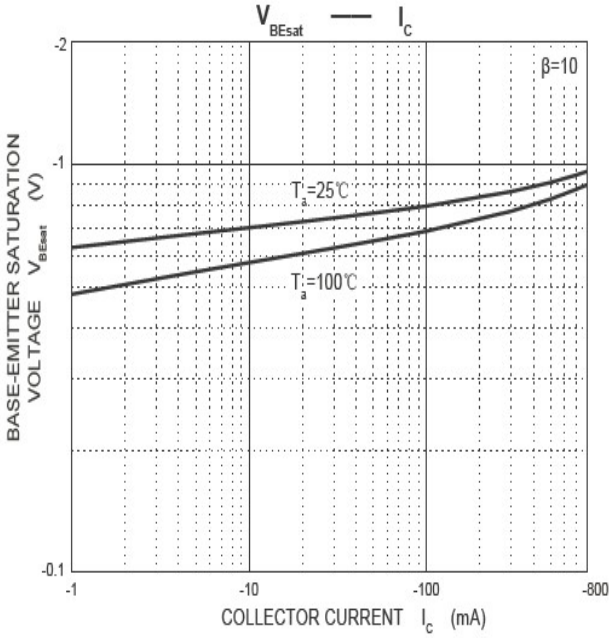
Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)









Ratings and Characteristics Curves

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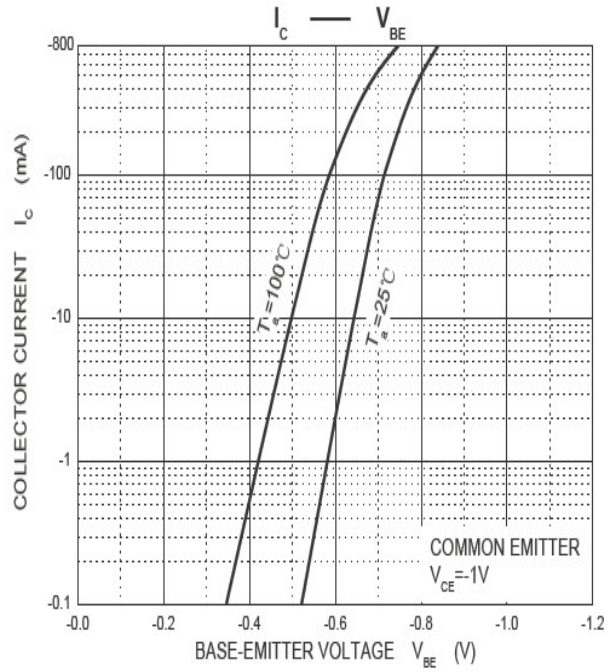
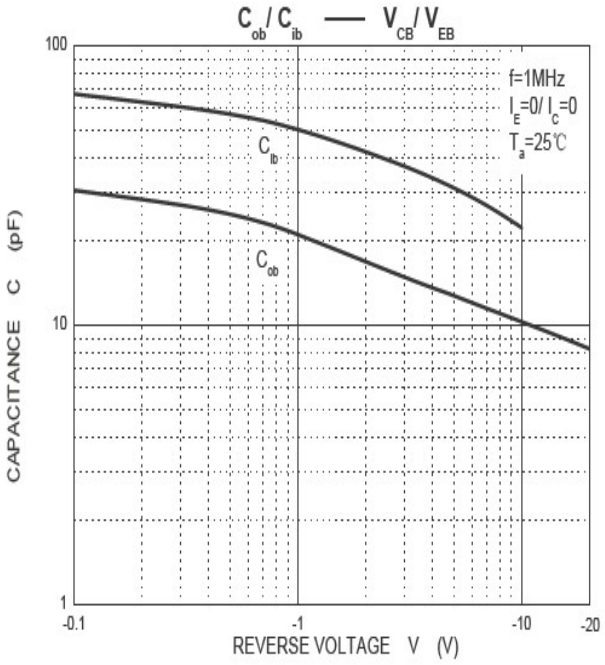
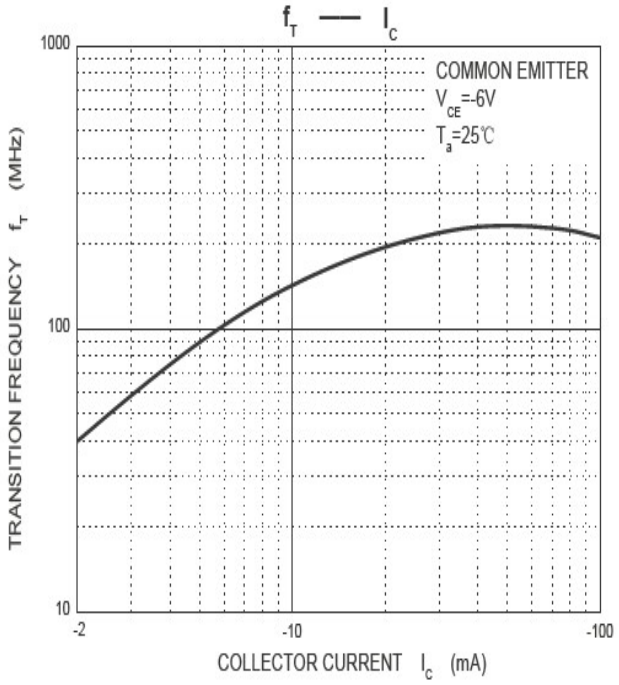
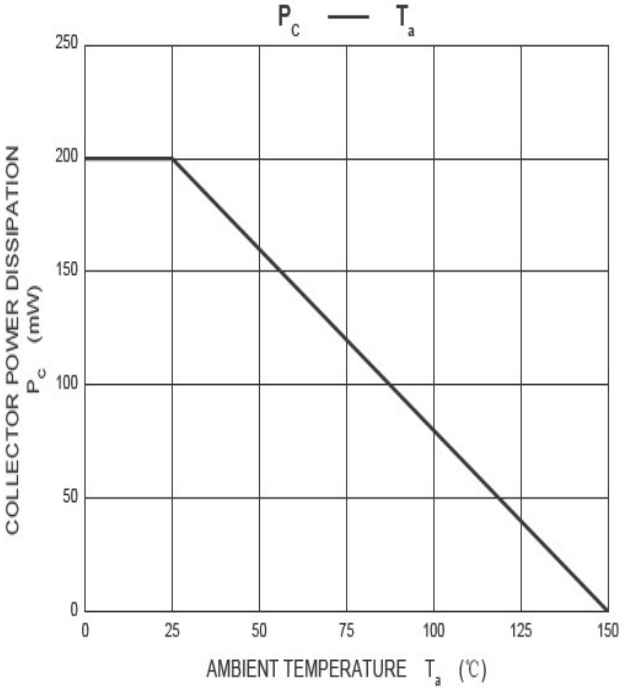


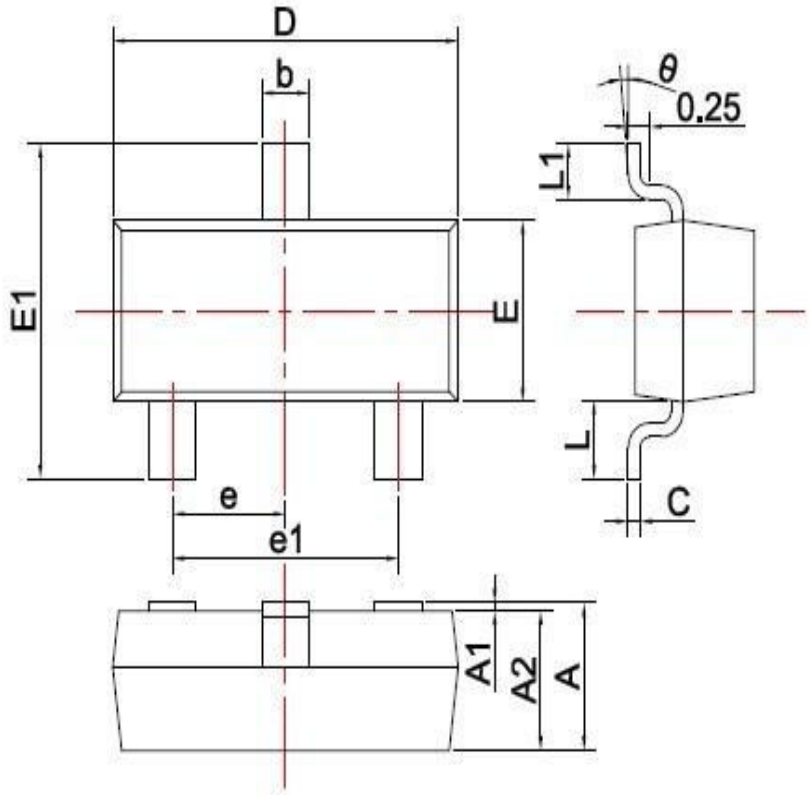






Package Outline Dimensions

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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