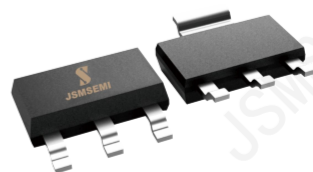


FEATURES

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary types: BCP54...BCP56 (NPN)


SOT-223
MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	BCP53-JSM	Unit
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-80	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-1	A
P_C	Collector Power Dissipation	1.5	W
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	94	$^{\circ}\text{C}/\text{W}$
T_{stg}	Storage Temperature Range	-65~+150	$^{\circ}\text{C}$

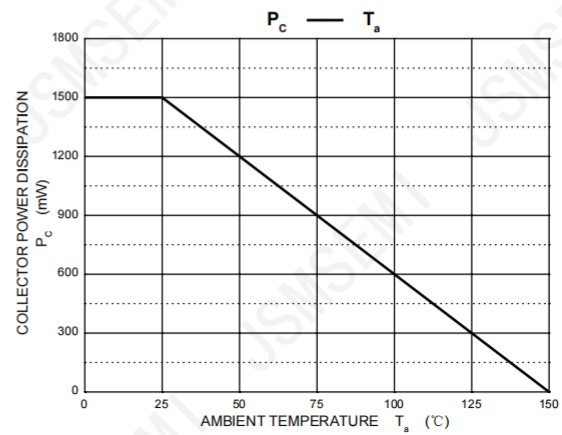
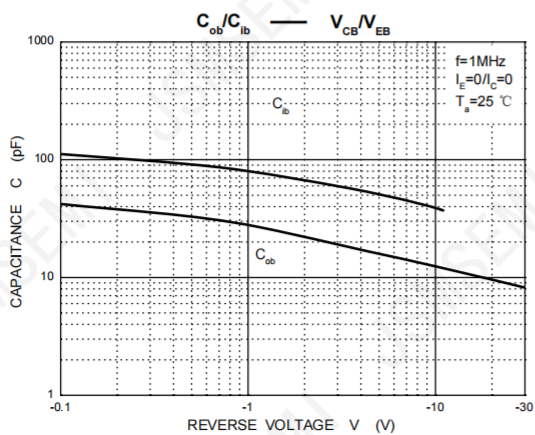
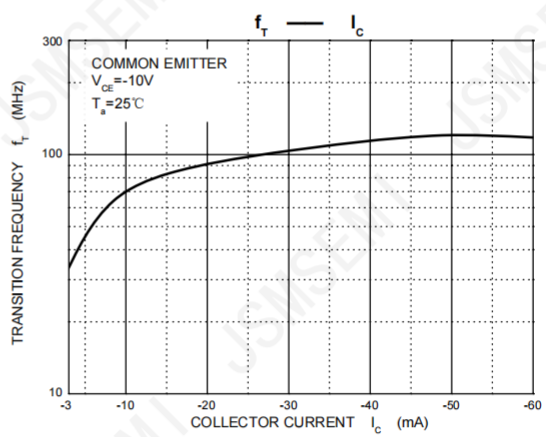
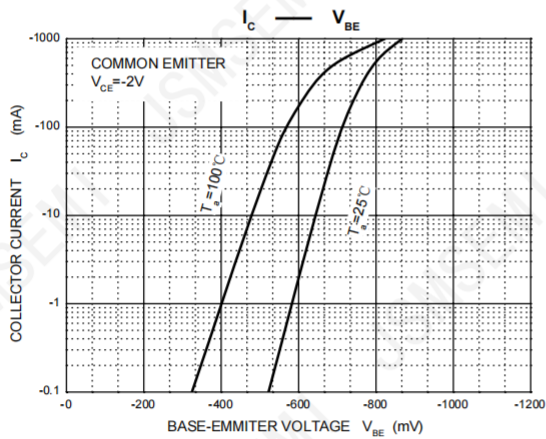
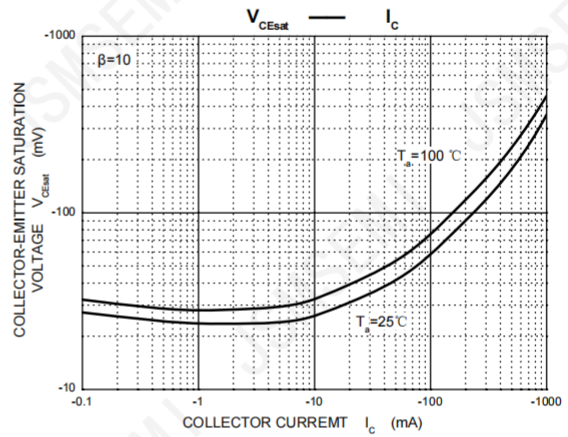
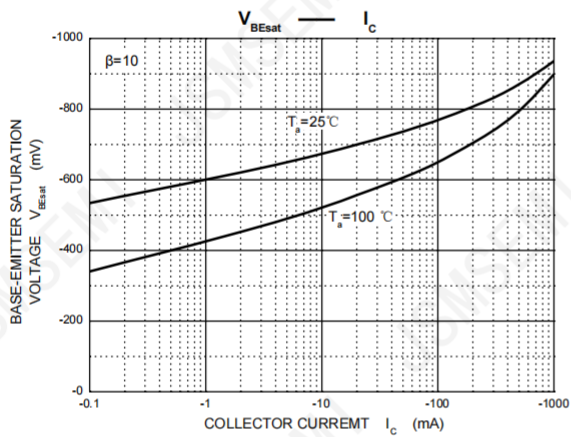
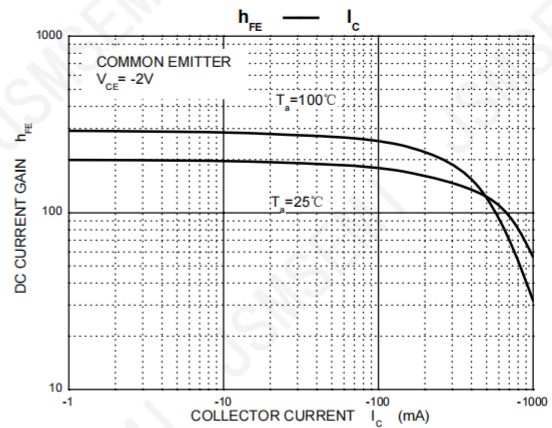
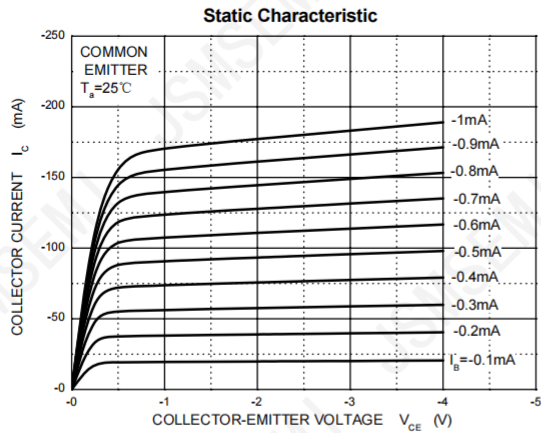
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -0.1\text{mA}, I_E = 0$	-100		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	-80		V
Base-emitter breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5		V
Collector cut-off current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$		-100	nA
DC current gain	$h_{FE(1)}$	$V_{CE} = -2\text{V}, I_C = -5\text{mA}$	25		
	$h_{FE(2)}$	$V_{CE} = -2\text{V}, I_C = -150\text{mA}$	63	250	
	$h_{FE(3)}$	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	25		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		-0.5	V
Base-emitter voltage	V_{BE}	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$		-1	V
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_C = -50\text{mA}, f = 100\text{MHz}$	100		MHz

CLASSIFICATION OF $h_{FE(2)}$

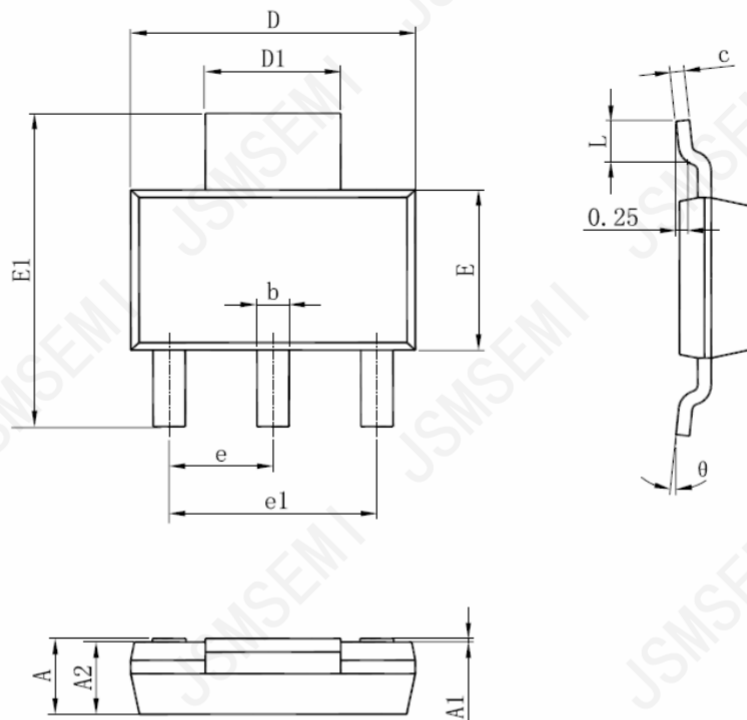
Rank	BCP53-JSM
Range	100-250

Typical Characteristics



Package Information

SOT-223



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.520	1.800	0.060	0.071
A1	0.000	0.100	0.000	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.820	0.026	0.032
c	0.250	0.350	0.010	0.014
D	6.200	6.400	0.244	0.252
D1	2.900	3.100	0.114	0.122
E	3.300	3.700	0.130	0.146
E1	6.830	7.070	0.269	0.278
e	2.300(BSC)		0.091(BSC)	
e1	4.500	4.700	0.177	0.185
L	0.900	1.150	0.035	0.045
θ	0°	10°	0°	10°

Revision History

Rev.	Change	Date
V1.0	Initial version	2/23/2024

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