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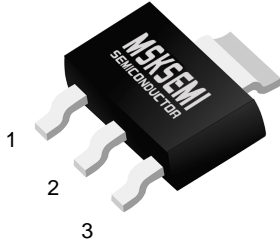


PLED

Product data sheet

SOT-223

- 1. BASE
- 2. COLLECTOR
- 3. EMITTER



BCP54-MS,55-MS,56-MS TRANSISTOR (NPN)

FEATURES

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary types: BCP51 ... BCP53 (PNP)

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

Symbol	Parameter	BCP54-MS	BCP55-MS	BCP56-MS	Unit
V _{CBO}	Collector-Base Voltage	45	60	100	V
V _{CEO}	Collector-Emitter Voltage	45	60	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 _{θJA}	Thermal Resistance Junction to Ambient	83.3			°C/W
T _{stg}	Storage Temperature Range	-65~+150			°C

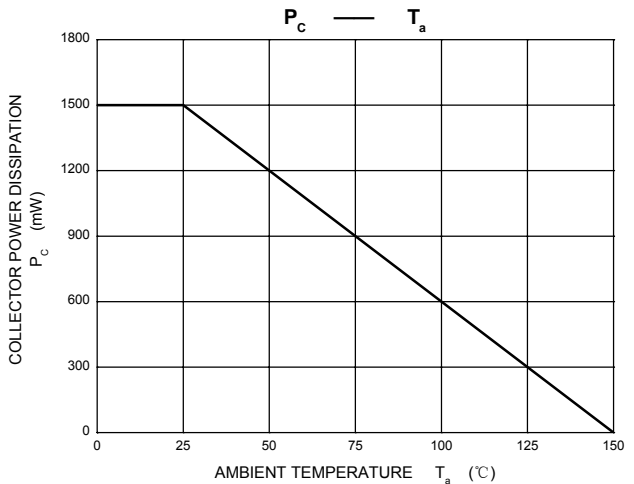
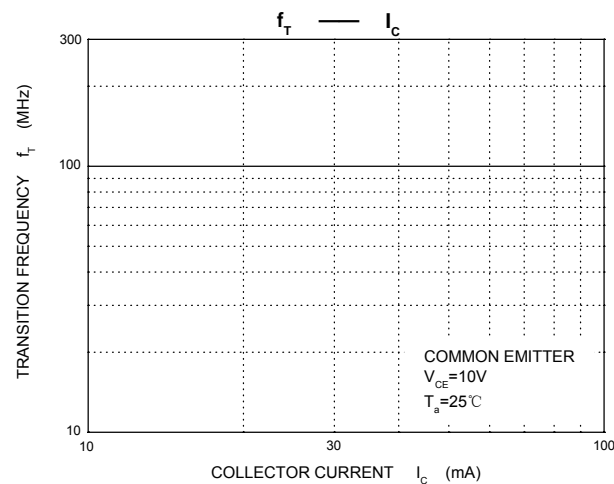
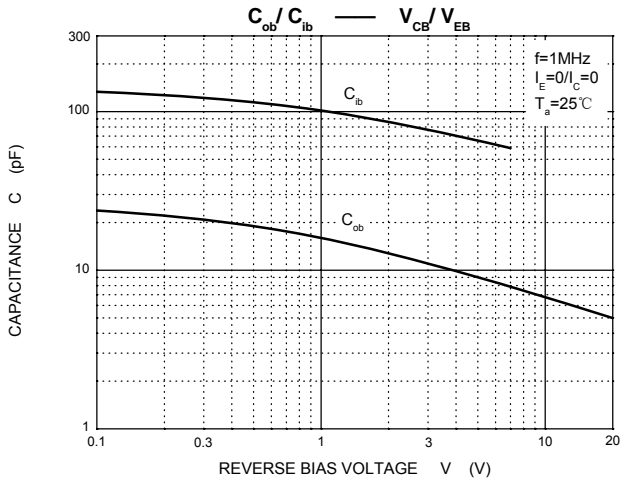
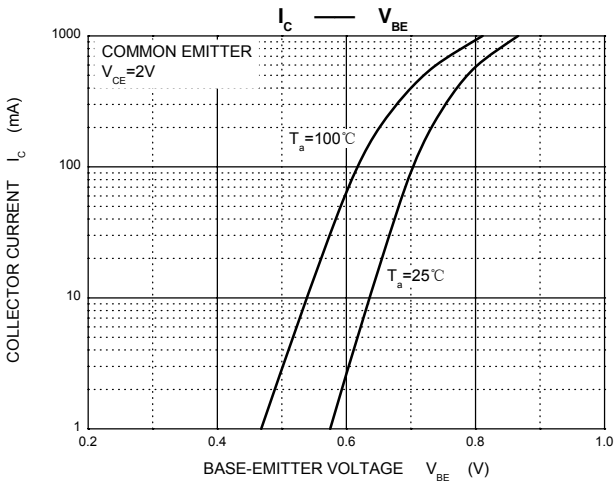
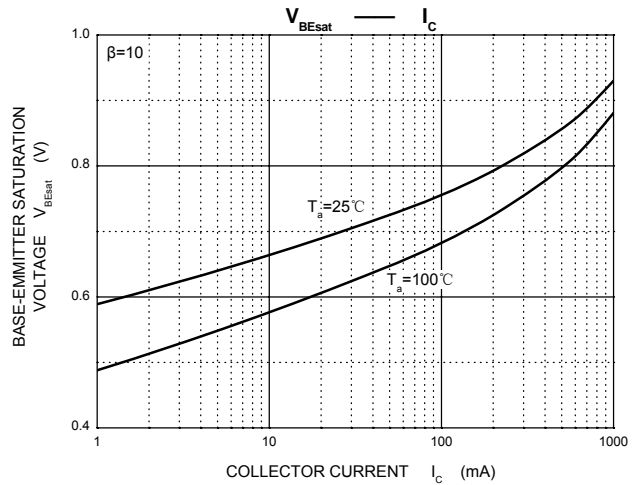
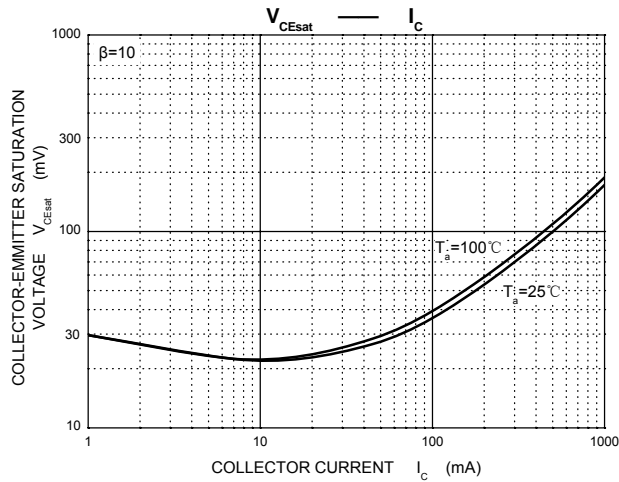
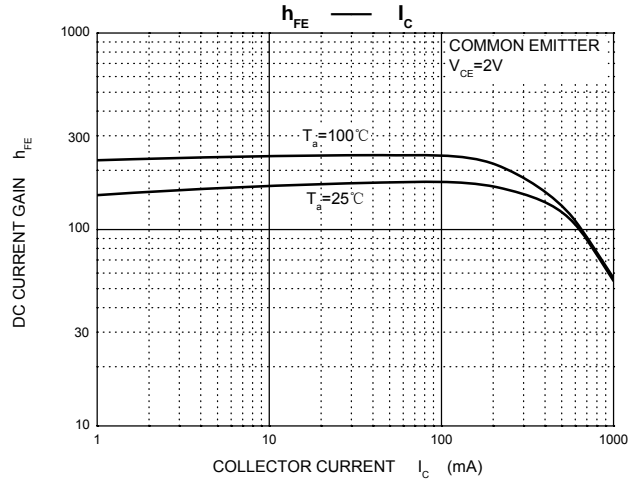
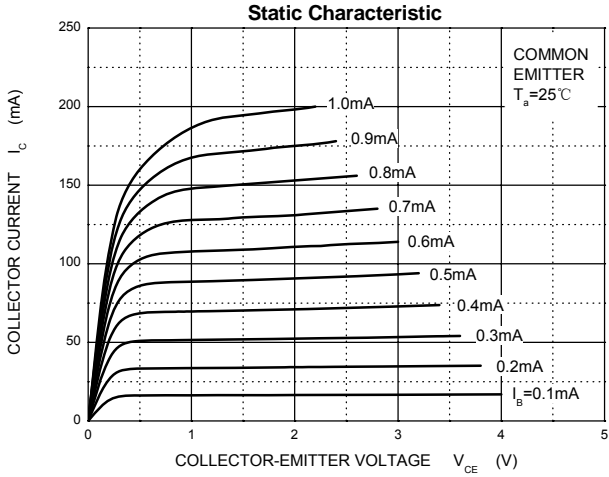
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit	
Collector-base breakdown voltage	BCP54-MS BCP55-MS BCP56-MS	V _{(BR)CBO} I _C = 0.1mA, I _E =0	45		V	
			60			
			100			
Collector-emitter breakdown voltage	BCP54-MS BCP55-MS BCP56-MS	V _{(BR)CEO} I _C = 10mA, I _B =0	45		V	
			60			
			80			
Base-emitter breakdown voltage	V _{(BR)EBO}	I _E = 10μA, I _C =0	5		V	
Collector cut-off current	I _{CBO}	V _{CB} = 30 V, I _E =0		100	nA	
DC current gain	h _{FE(1)} h _{FE(2)} h _{FE(3)}	V _{CE} = 2V, I _C =5mA	25			
			V _{CE} = 2V, I _C =150m A	63		250
			V _{CE} = 2V, I _C =500m A	25		
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500mA, I _B =50mA		0.5	V	
Base-emitter voltage	V _{BE}	V _{CE} =2V, I _C =500m A		1	V	
Transition frequency	f _T	V _{CE} =10V, I _C =50mA, f=100MHz	100		MHz	

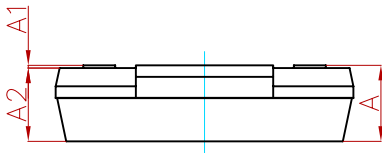
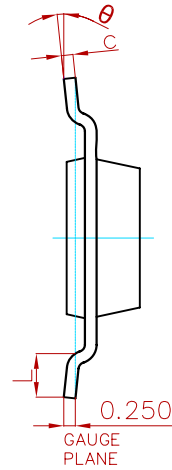
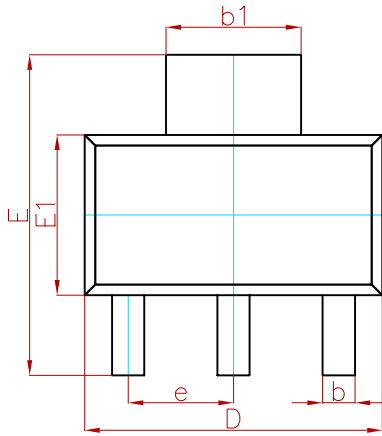
CLASSIFICATION OF h_{FE(2)}

Rank	BCP54-10, BCP55-10, BCP56-10	BCP54-16, BCP55-16, BCP56-16
Range	63-160	100-250

Typical Characteristics

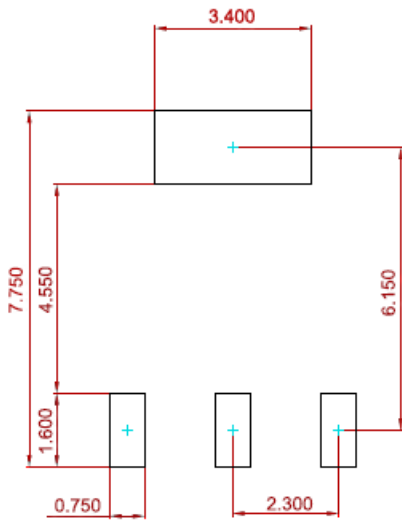


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	—	1.800	—	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	6.700	7.300	0.264	0.287
E1	3.300	3.700	0.130	0.146
e	2.300(BSC)		0.091(BSC)	
L	0.750	—	0.030	—
θ	0°	10°	0°	10°

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ±0.050mm.
3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
BCP54-MS BCP55-MS BCP56-MS	SOT-223	1000

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