

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

BCX54/BCX55/BCX56(MS)

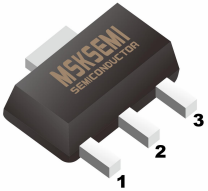
Product specification

BCX54,BCX55,BCX56 TRANSISTOR (NPN)
FEATURES

- PNP Complements to BCX51,BCX52,BCX53
- Low Voltage
- High Current

APPLICATIONS

- Driver Stages of Audio Amplifiers

Pin Configuration	Marking
 <p>1.Base 2.Collector 3.Emitter</p>	<p>BCX54(MS):BA, BCX54-10(MS):BC, BCX54-16(MS):BD BCX55(MS):BE, BCX55-10(MS):BG, BCX55-16(MS):BM BCX56(MS):BH, BCX56-10(MS):BK, BCX56-16(MS):BL</p>

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

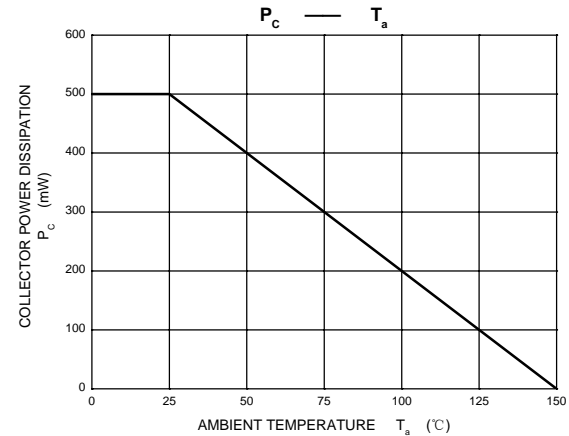
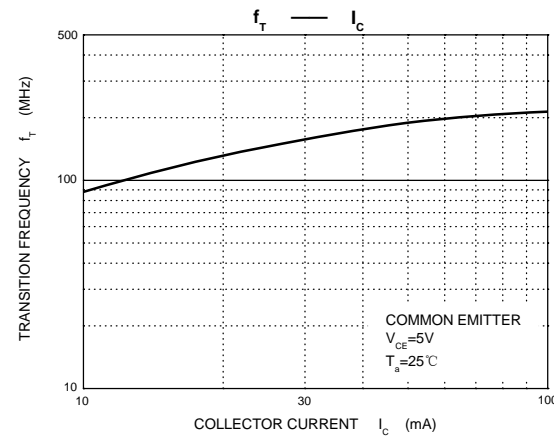
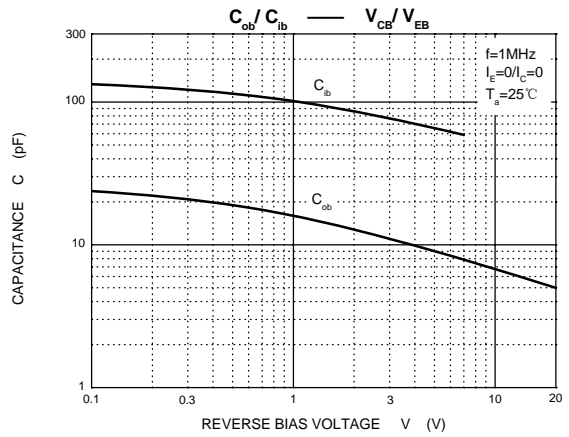
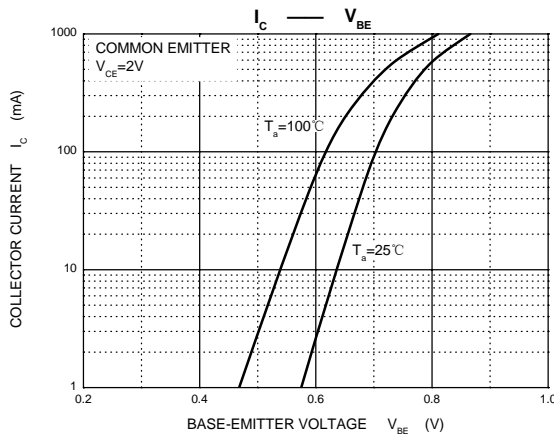
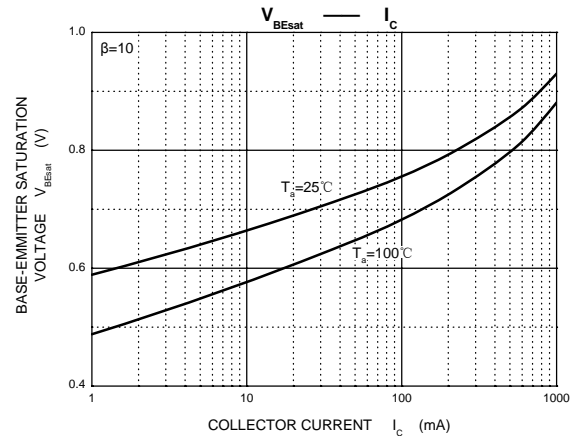
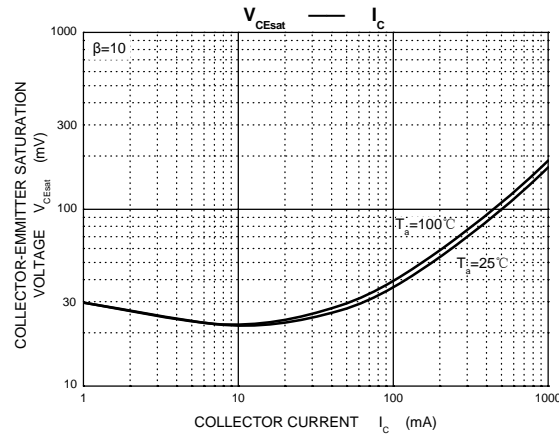
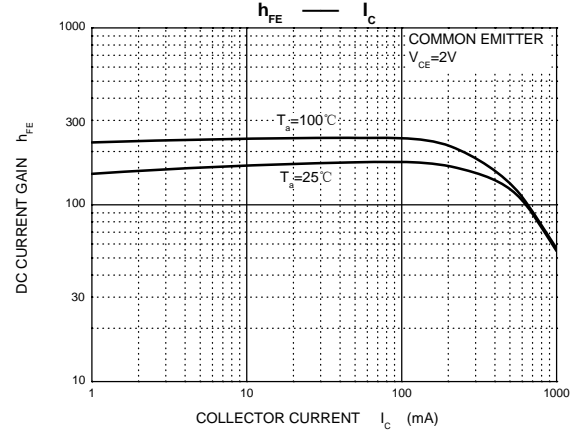
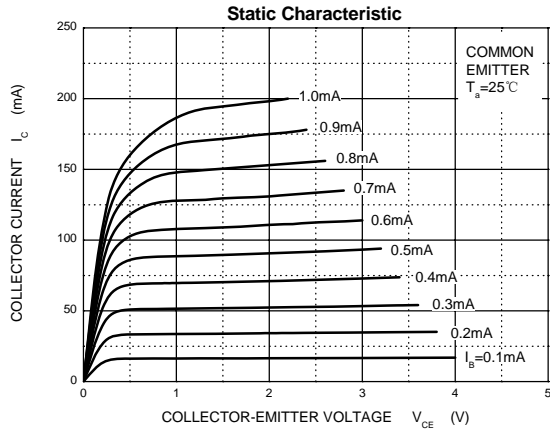
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	BCX54	45
		BCX55	60
		BCX56	100
V_{CEO}	Collector-Emitter Voltage	BCX54	45
		BCX55	60
		BCX56	80
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1	A
P_C	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	°C/W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	BCX54	45		V
			BCX55	60		
			BCX56	100		
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C = 10mA, I_B = 0$	BCX54	45		V
			BCX55	60		
			BCX56	80		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu A, I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 30V, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			0.1	μA
DC current gain	$h_{FE(1)}^*$	$V_{CE} = 2V, I_C = 5mA$	40			
	$h_{FE(2)}^*$	$V_{CE} = 2V, I_C = 150mA$	63		250	
	$h_{FE(3)}^*$	$V_{CE} = 2V, I_C = 0.5A$	25			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C = 0.5A, I_B = 50mA$			0.5	V
Base -emitter voltage	V_{BE}^*	$V_{CE} = 2V, I_C = 0.5A$			1	V
Transition frequency	f_T	$V_{CE} = 5V, I_C = 10mA, f = 100MHz$		130		MHz

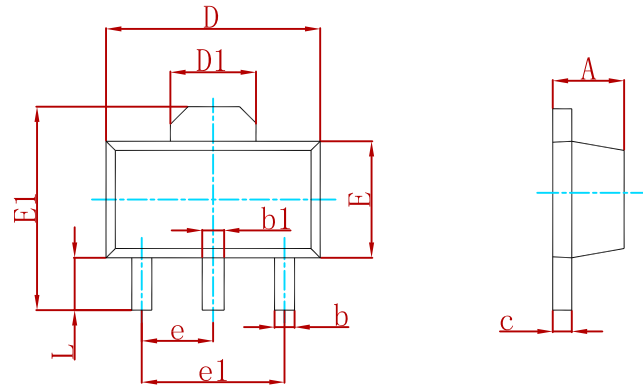
CLASSIFICATION OF $h_{FE(2)}$

RANK	BCX54(MS) BCX55(MS) BCX56(MS)	BCX54-10(MS) BCX55-10(MS) BCX56-10(MS)	BCX54-16(MS) BCX55-16(MS) BCX56-16(MS)
RANGE	63 - 250	63 - 160	100 - 250

Typical Characteristics BCX54,BCX55,BCX56

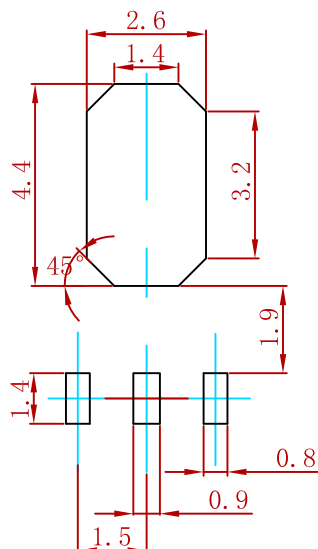


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05 mm.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
BCX54/BCX55/BCX56(MS)	SOT-89	1000

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