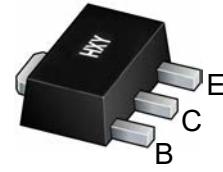




Features

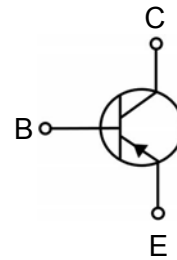
- High collector current
- Low collector-emitter saturation voltage
- Complementary types: BCX54/55/56-16 series (NPN)
- AEC-Q101 qualified



SOT-89

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BCX51-16	SOT-89	AD	1000
BCX52-16	SOT-89	AM	1000
BCX53-16	SOT-89	AL	1000



MAXIMUM RATINGS (Ta=25 unless otherwise noted)

Parameter	Symbol	BCX51-16	BCX52-16	BCX53-16	Unit
Collector-base voltage	V_{CBO}	-45	-60	-100	V
Collector-emitter voltage	V_{CEO}	-45	-60	-80	V
Emitter-base voltage	V_{EBO}		-5		V
Collector continuous current	I_C		-1		A
Collector power dissipation	$P_C^{(1)}$		0.5		W
Thermal resistance from junction to ambient	$R_{\theta JA}^{(1)}$		250		°C/W
Collector power dissipation	$P_C^{(2)}$		2		W
Thermal resistance from junction to ambient	$R_{\theta JA}^{(2)}$		61.5		°C/W
Operating junction and storage temperature range	T_j, T_{stg}		-55 ~ 150		°C

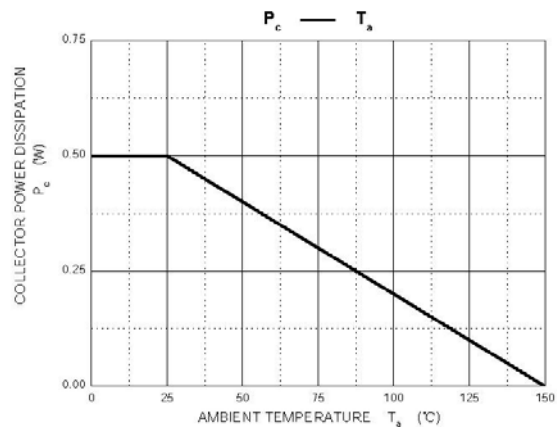
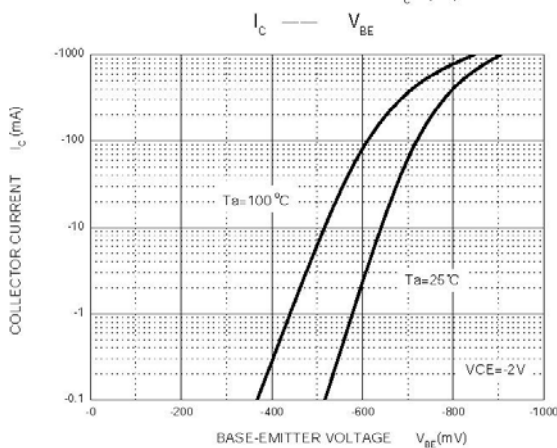
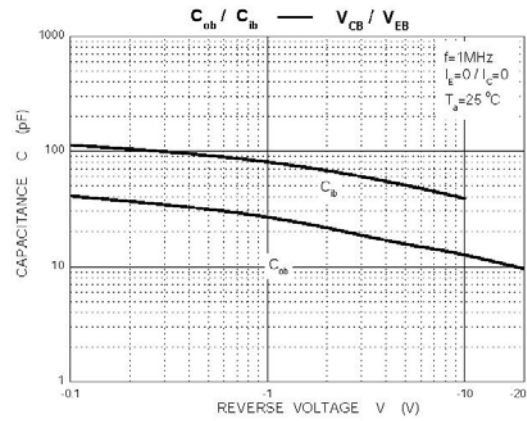
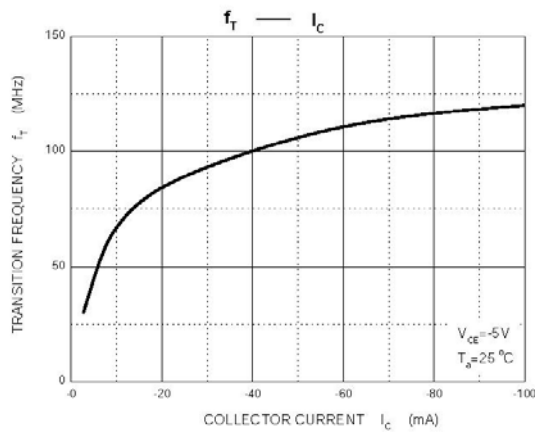
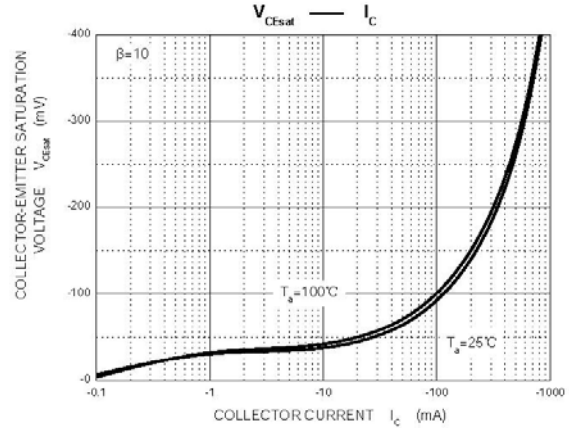
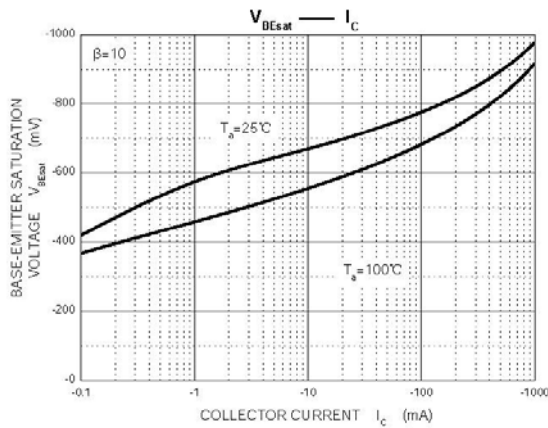
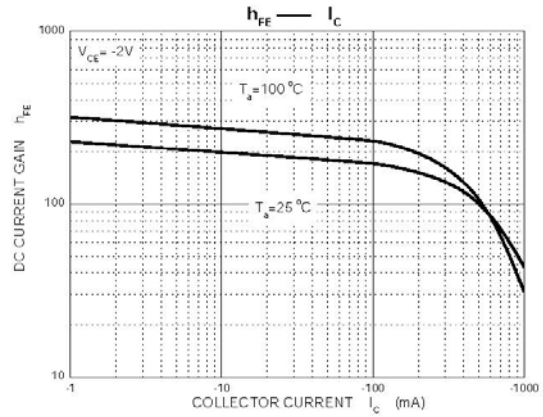
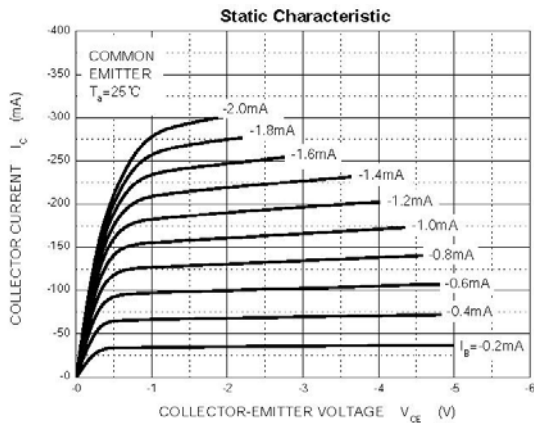


ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	AD-BCX51*	$I_C = -0.1\text{mA}, I_E = 0\text{A}$	-45	-	-	V
	AD-BCX52*		-60	-	-	
	AD-BCX53*		-100	-	-	
Collector-emitter breakdown voltage	AD-BCX51*	$I_C = -10\text{mA}, I_B = 0\text{A}$	-45	-	-	V
	AD-BCX52*		-60	-	-	
	AD-BCX53*		-80	-	-	
Base-emitter breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}, I_C = 0\text{A}$	-5	-	-	V
Collector-base cut-off current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0\text{A}$	-	-	-0.1	μA
Emitter-base cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0\text{A}$	-	-	-0.1	μA
DC current gain	$h_{FE(1)}^{(3)}$	$V_{CE} = -2\text{V}, I_C = -5\text{mA}$	63	-	-	-
	$h_{FE(2)}^{(3)}$	$V_{CE} = -2\text{V}, I_C = -150\text{mA}$	100	-	250	
	$h_{FE(3)}^{(3)}$	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	40	-	-	
Collector-emitter saturation voltage	$V_{CE(sat)}^{(3)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$	-	-	-0.5	V
Base-emitter voltage	$V_{BE}^{(3)}$	$I_C = -500\text{mA}, V_{CE} = -2\text{V}$	-	-	-1	V
Transition frequency	f_T	$V_{CE} = -5\text{V}, I_C = -10\text{mA}, f = 100\text{MHz}$	-	50	-	MHz

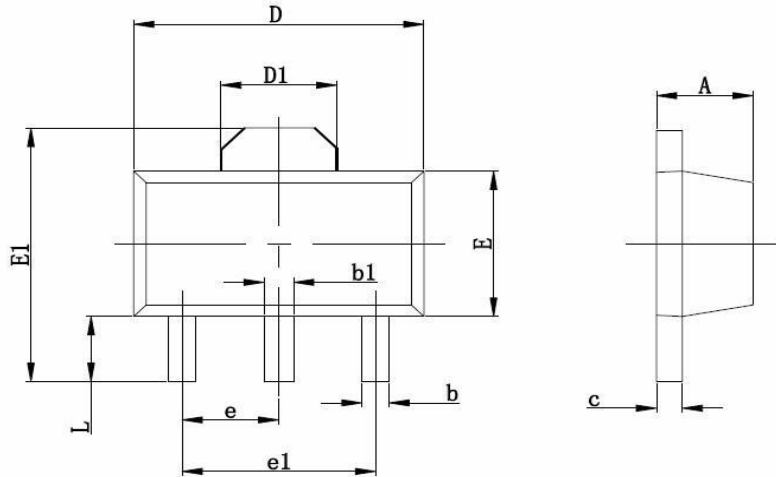


Typical Characteristics





SOT-89 Package Outline Dimensions



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



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