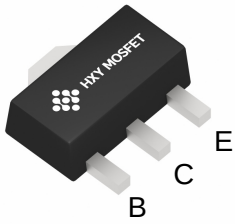
BCX54-16,115

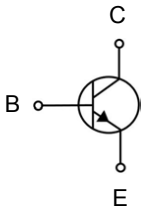
NPN Plastic-Encapsulate Transistors

Features

- Collector Current: I_C= 1A
- Power Dissipation of 500mW



SOT-89



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BCX54-16,115	SOT-89	BCX54-16	1000

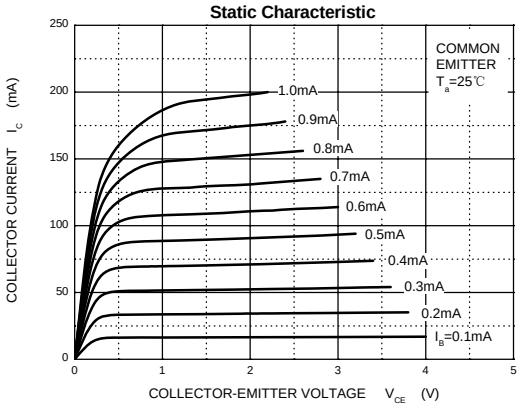
Maximum Ratings (Ta=25°C unless otherwise noted)

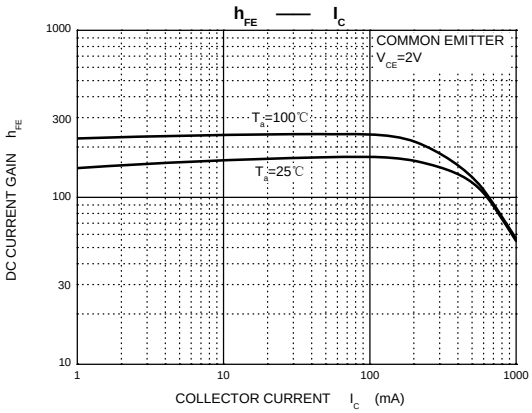
Symbl	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	45	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	1	A
P_C	Collector Power Dissipation	500	mW
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55-150	°C

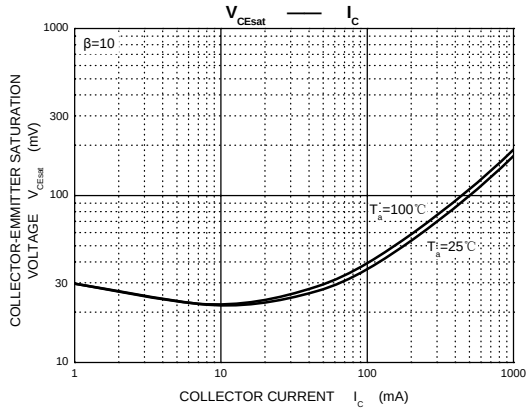
Electrical Characteristics (Ta=25°C unless otherwise specified)

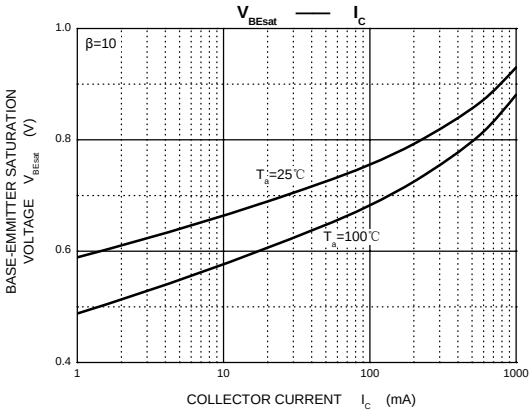
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	45			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=10mA,I_B=0	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=30V,I_E=0			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	100		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

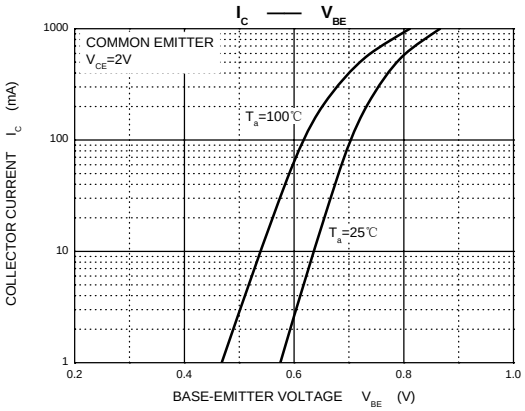
Typical Characteristics

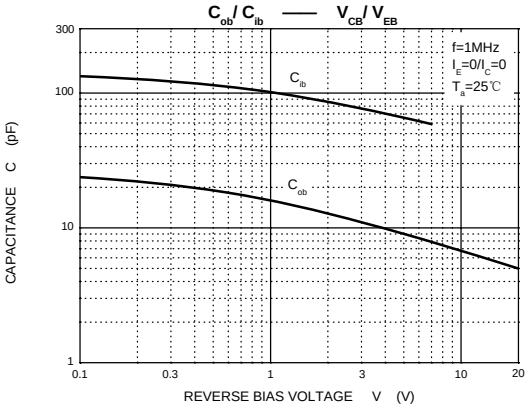


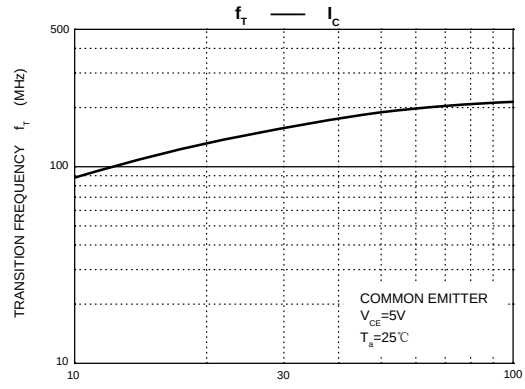


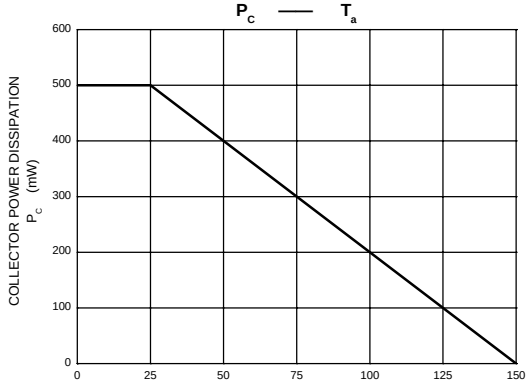




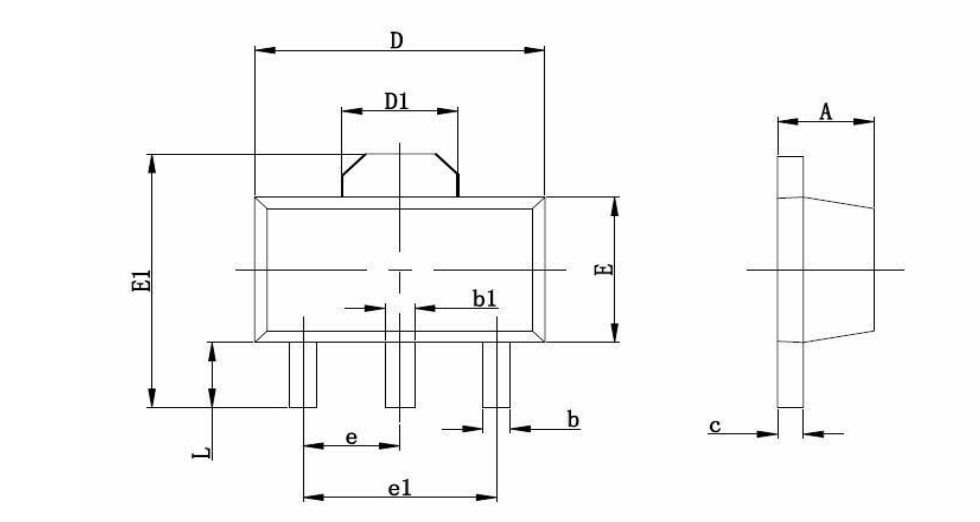








SOT-89 Package Outline Dimensions



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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