

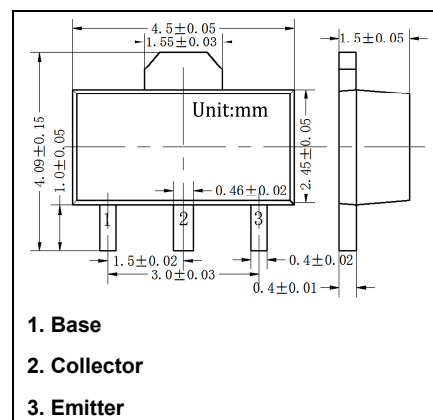
## SOT-89 Plastic-Encapsulate Transistors

### 2SB1188-R PNP Transistors

#### Features

- Low  $V_{CE(sat)}$
- Complements the 2SD1766

Marking: BCR



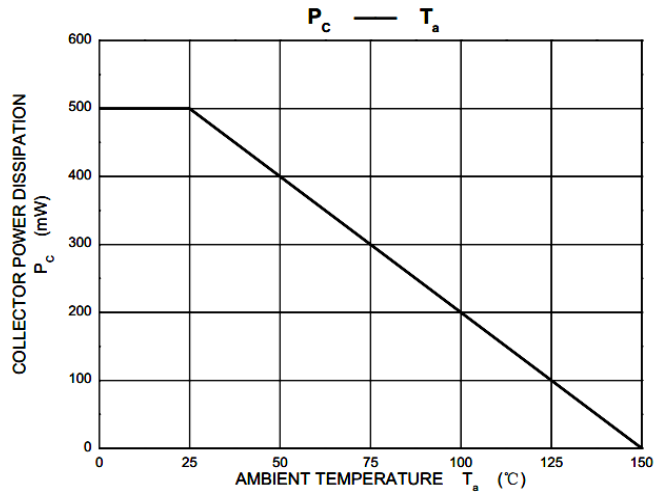
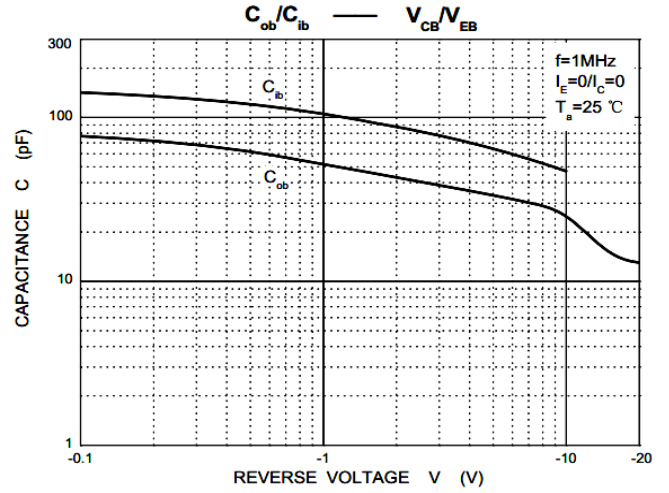
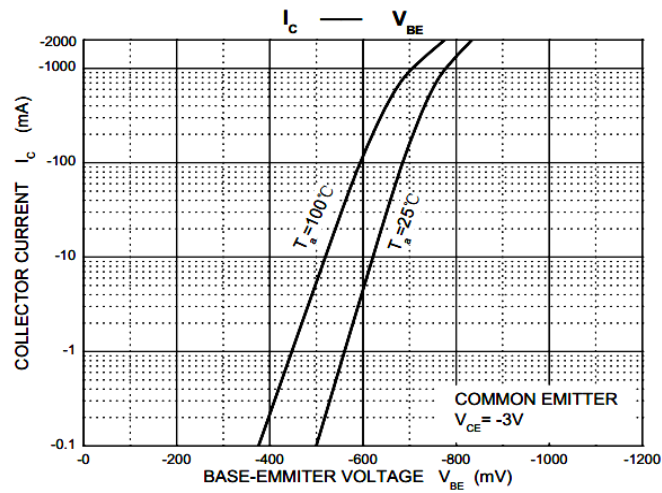
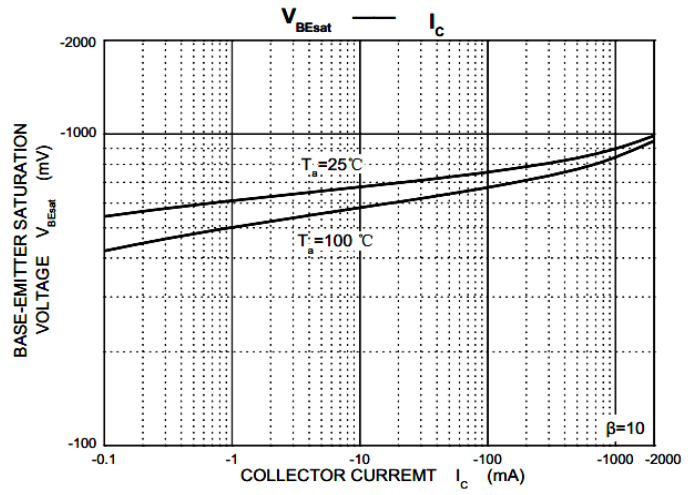
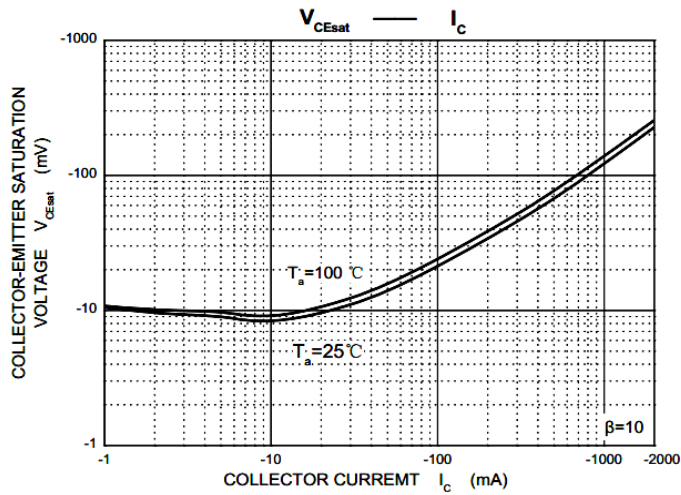
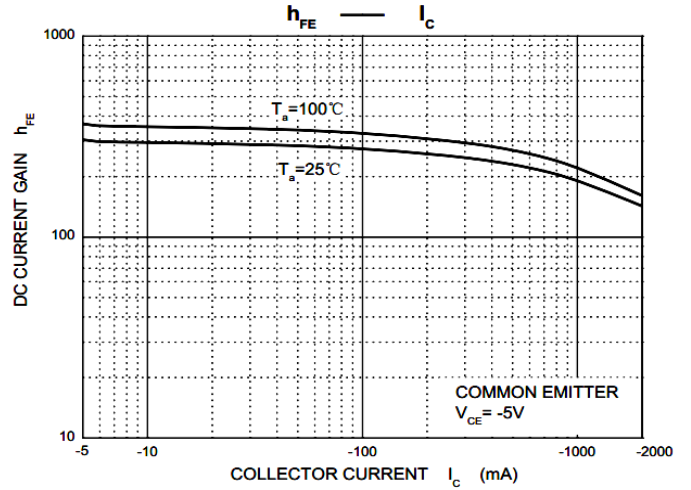
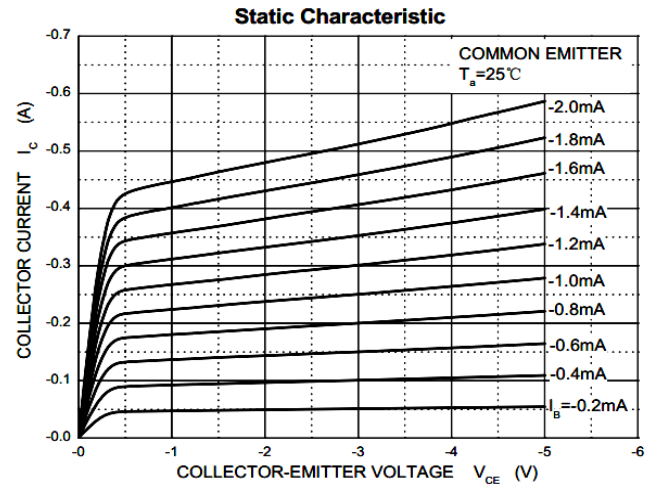
#### Maximum Ratings ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector Base Voltage	-40	V
$V_{CEO}$	Collector Emitter Voltage	-32	V
$V_{EBO}$	Emitter Base Voltage	-5	V
$I_C$	Collector Current	-2	A
$P_C$	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	$^\circ\text{C/W}$
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$

#### Electrical Characteristics ( $T_a=25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -50\mu\text{A}, I_E = 0$	-40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1\text{mA}, I_B = 0$	-32			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -50\mu\text{A}, I_C = 0$	-5			V
$I_{CBO}$	Collector cut-off current	$V_{CB} = -20\text{V}, I_E = 0$			-1	$\mu\text{A}$
$I_{EBO}$	Emitter cut-off current	$V_{EB} = -4\text{V}, I_C = 0$			-1	$\mu\text{A}$
$h_{FE(1)}$	DC current gain*	$V_{CE} = -5\text{V}, I_C = -1\text{mA}$	82			
$h_{FE(2)}$		$V_{CE} = -3\text{V}, I_C = -500\text{mA}$	180		390	
$V_{CE(sat)}$	Collector-emitter saturation voltage*	$I_C = -2\text{A}, I_B = -0.2\text{A}$			-0.8	V
$f_T$	Transition frequency	$V_{CE} = -5\text{V}, I_C = -0.5\text{A}, f = 30\text{MHz}$		100		MHz
$C_{ob}$	Output capacitance	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		50		pF

# Typical Characteristics



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