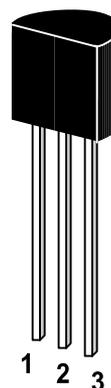


ST BC556 ... BC559

PNP Silicon Epitaxial Planar Transistor
for switching and AF amplifier applications.

These transistors are subdivided into three groups A, B and C according to their current gain. the type BC556 is available in groups A and B, however, the types BC557 and BC558 can be supplied in all three groups. The BC559 is a low-noise type available in all three groups. As complementary types, the NPN transistors BC546...BC549 are recommended.

On special request, these transistors can be manufactured in different pin configurations.



1. Collector 2. Base 3. Emitter

TO-92 Plastic Package

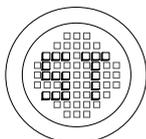
Weight approx. 0.19g

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

		Symbol	Value	Unit
Collector Base Voltage	ST BC556	$-V_{\text{CBO}}$	80	V
	ST BC557	$-V_{\text{CBO}}$	50	V
	ST BC558, ST BC559	$-V_{\text{CBO}}$	30	V
Collector Emitter Voltage	ST BC556	$-V_{\text{CES}}$	80	V
	ST BC557	$-V_{\text{CES}}$	50	V
	ST BC558, ST BC559	$-V_{\text{CES}}$	30	V
Collector Emitter Voltage	ST BC556	$-V_{\text{CEO}}$	65	V
	ST BC557	$-V_{\text{CEO}}$	45	V
	ST BC558, ST BC559	$-V_{\text{CEO}}$	30	V
Emitter Base Voltage		$-V_{\text{EBO}}$	5	V
Collector Current		$-I_{\text{C}}$	100	mA
Peak Collector Current		$-I_{\text{CM}}$	200	mA
Peak Base Current		$-I_{\text{BM}}$	200	mA
Peak Emitter Current		I_{EM}	200	mA
Power Dissipation		P_{tot}	500 ¹⁾	mW
Junction Temperature		T_{j}	150	$^\circ\text{C}$
Storage Temperature Range		T_{s}	-65 to +150	$^\circ\text{C}$

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case

G S P FORM A IS AVAILABLE



®

РАДИОТЕХ-ТРЕЙД

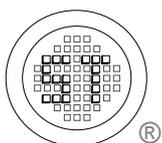
Тел.: (495) 795-0805
Факс: (495) 234-1603
Эл. почта: info@rct.ru
Веб: www.rct.ru

ST BC556 ... BC559

Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

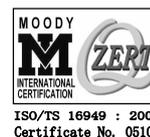
		Symbol	Min.	Typ.	Max.	Unit
h-Parameters at $-V_{CE}=5\text{V}$, $-I_C=2\text{mA}$, $f=1\text{kHz}$						
Current Gain	Current Gain Group	A	h_{fe}	-	220	-
		B	h_{fe}	-	330	-
		C	h_{fe}	-	600	-
Input Impedance	Current Gain Group	A	h_{ie}	1.6	2.7	4.5
		B	h_{ie}	3.2	4.5	8.5
		C	h_{ie}	6	8.7	15
Output Admittance	Current Gain Group	A	h_{oe}	-	18	30
		B	h_{oe}	-	30	60
		C	h_{oe}	-	60	110
Reverse Voltage Transfer Ratio	Current Gain Group	A	h_{re}	-	$1.5 \cdot 10^{-4}$	-
		B	h_{re}	-	$2 \cdot 10^{-4}$	-
		C	h_{re}	-	$3 \cdot 10^{-4}$	-
DC Current Gain						
at $-V_{CE}=5\text{V}$, $-I_C=10\mu\text{A}$	Current Gain Group	A	h_{FE}	-	90	-
		B	h_{FE}	-	150	-
		C	h_{FE}	-	270	-
at $-V_{CE}=5\text{V}$, $-I_C=2\text{mA}$	Current Gain Group	A	h_{FE}	110	180	220
		B	h_{FE}	200	290	450
		C	h_{FE}	420	500	800
at $-V_{CE}=5\text{V}$, $-I_C=100\text{mA}$	Current Gain Group	A	h_{FE}	-	120	-
		B	h_{FE}	-	200	-
		C	h_{FE}	-	400	-
Collector Saturation Voltage						
at $-I_C=10\text{mA}$, $-I_B=0.5\text{mA}$		$-V_{CEsat}$	-	80	300	mV
at $-I_C=100\text{mA}$, $-I_B=5\text{mA}$		$-V_{CEsat}$	-	250	650	mV
Base Saturation Voltage						
at $-I_C=10\text{mA}$, $-I_B=0.5\text{mA}$		$-V_{BEsat}$	-	700	-	mV
at $-I_C=100\text{mA}$, $-I_B=5\text{mA}$		$-V_{BEsat}$	-	900	-	mV
Base Emitter Voltage						
at $-V_{CE}=5\text{V}$, $-I_C=2\text{mA}$		$-V_{BE}$	600	660	750	mV
at $-V_{CE}=5\text{V}$, $-I_C=10\text{mA}$		$-V_{BE}$	-	-	800	mV
Collector Emitter Cutoff Current						
at $-V_{CE}=80\text{V}$	ST BC556	$-I_{CES}$	-	0.2	15	nA
at $-V_{CE}=50\text{V}$	ST BC557	$-I_{CES}$	-	0.2	15	nA
at $-V_{CE}=30\text{V}$	ST BC558, ST BC559	$-I_{CES}$	-	0.2	15	nA
at $-V_{CE}=80\text{V}$, $T_J=125\text{ }^{\circ}\text{C}$	ST BC556	$-I_{CES}$	-	-	4	μA
at $-V_{CE}=50\text{V}$, $T_J=125\text{ }^{\circ}\text{C}$	ST BC557	$-I_{CES}$	-	-	4	μA
at $-V_{CE}=30\text{V}$, $T_J=125\text{ }^{\circ}\text{C}$	ST BC558, ST BC559	$-I_{CES}$	-	-	4	μA
Thermal Resistance Junction to Ambient Air		R_{thA}	-	-	250 ¹⁾	K/W

1) Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case



SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, acompany listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002 Certificate No. 05103



ISO 14001 Certificate No. 7116



ISO 9001 : 2000 Certificate No. 000-199-01-002-001

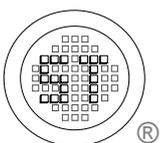
Dated : 07/12/2002

ST BC556 ... BC559

Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

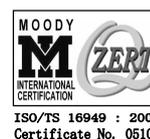
	Symbol	Min.	Typ.	Max.	Unit
Gain-Bandwidth Product at $-V_{CE}=5\text{V}$, $-I_C=10\text{mA}$, $f=100\text{MHz}$	f_T	-	150	-	MHz
Collector-Base Capacitance at $-V_{CB}=10\text{V}$, $f=1\text{MHz}$	C_{CBO}	-	-	6	pF
Noise Figure at $-V_{CE}=5\text{V}$, $-I_C=200\mu\text{A}$, $R_G=2\text{k}\Omega$, $f=1\text{kHz}$, $\Delta f=200\text{Hz}$					
ST BC556, ST BC557, ST BC558	F	-	2	10	dB
ST BC559	F	-	1	4	dB

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Dated : 07/12/2002