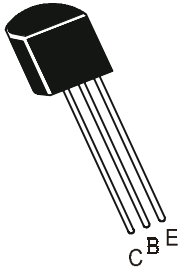


PNP SILICON PLANAR EPITAXIAL TRANSISTORS

BC559, B, C
BC560, B, C

TO-92
Plastic Package



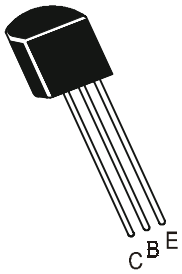
Low Noise Transistors

ABSOLUTE MAXIMUM RATINGS(Ta=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	BC559	BC560	UNITS
Collector Emitter Voltage	V_{CEO}	30	45	V
Collector Base Voltage	V_{CBO}	30	50	V
Emitter Base Voltage	V_{EBO}	5	5	V
Collector Current Continuous	I_C		100	mA
Power Dissipation @ Tc=25°C	P_D		625	mW
Derate Above 25°C			5	mW/°C
Power Dissipation @ Tc=25°C	P_D		1.5	W
Derate Above 25°C			12	mW/°C
Operating And Storage Junction Temperature Range	T_j, T_{stg}		-55 to +150	°C
THERMAL RESISTANCE				
Junction to ambient	$R_{th(j-a)}$		200	°C/W
Junction to case	$R_{th(j-c)}$		83.3	°C/W

PNP SILICON PLANAR EPITAXIAL TRANSISTORS

BC559, B, C
BC560, B, C



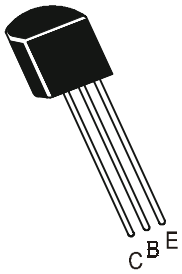
TO-92
Plastic Package

ELECTRICAL CHARACTERISTICS (Ta=25°C Unless Specified Otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Voltage	BC559	V_{CEO} $I_C=10mA, I_B=0$	30			V
	BC560		45			V
Collector Base Voltage	BC559	V_{CBO} $I_C=10\mu A, I_E=0$	30			V
	BC560		50			V
Emitter Base Voltage		V_{EBO} $I_E=10\mu A, I_C=0$	5			V
Collector Cut off Current		I_{CBO} $V_{CB}=30V, I_E=0$			15	nA
		$V_{CB}=30V, I_E=0$			5	μA
		$T_a=+125^\circ C$				
Emitter Cut off Current		I_{EBO} $V_{CE}=40V, I_C=0$			15	nA
DC Current Gain	B	$V_{CE}=5V, I_C=10\mu A$	100			
	C		100			
	B	$V_{CE}=5V, I_C=2mA$	180		460	
	C		380		800	
	BC559, BC560		120		800	
Collector Emitter Saturation Voltage		$V_{CE(sat)}$ $I_C=10mA, I_B=0.5mA$			0.25	V
		$I_C=100mA, I_B=$ see note 1			0.6	V
		$I_C=100mA, I_B=5mA^*$		0.25		V

PNP SILICON PLANAR EPITAXIAL TRANSISTORS

BC559, B, C
BC560, B, C



TO-92
Plastic Package

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=5mA^*$		1.1		V
Base Emitter On Voltage	$V_{BE(on)}$	$I_C=10\mu A, V_{CE}=5V$		0.52		V
		$I_C=100\mu A, V_{CE}=5V$		0.55		V
		$I_C=2mA, V_{CE}=5V$	0.55		0.70	V

ELECTRICAL CHARACTERISTICS (Ta=25°C Unless Otherwise Specified)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
DYNAMICS CHARACTERISTICS						
Transition Frequency	f_T	$I_C=10mA, V_{CE}=5V$ $f=100MHz$		250		MHz
Collector Base Capacitance	C_{cbo}	$V_{CB}=10V, I_E=0,$ $f=1MHz$		2.5		pF
Noise Figure	NF_1	$V_{CE}=5V, I_C=200\mu A$ $R_S=2KW, f=30Hz$ To 15KHz			2.0	dB
	NF_2	$V_{CE}=5V, I_C=200\mu A$ $R_S=100KW, f=1.0KHz$ $f=200Hz$			10	dB
Small Signal Current Gain	B	$ h_{fe} $	$V_{CE}=5V, I_C=2mA$	240		500
	C		$f=1kHz$	450		900