

Olitech Electronics Co. Ltd

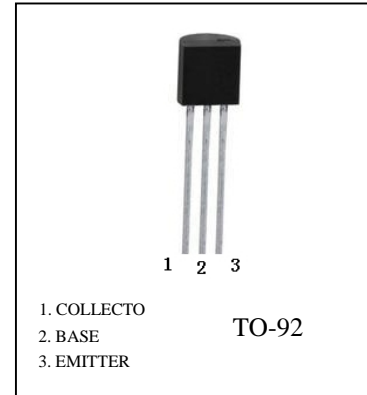
Email: info@olitech-elec.com Website: www.olitech-elec.com

Plastic-Encapsulate Transistors

FEATURES

- High Voltage
- Complement to BC546,BC547,BC548

BC556/BC557/BC558 (PNP)



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

Symbol	Parameter	Value	Unit	
V _{CBO}	Collector-Base Voltage	BC556	-80	V
		BC557	-50	
		BC558	-30	
V _{CEO}	Collector-Emitter Voltage	BC556	-65	V
		BC557	-45	
		BC558	-30	
V _{EBO}	Emitter-Base Voltage	-5	V	
I _C	Collector Current-Continuous	-0.1	A	
P _C	Collector Power Dissipation	625	mW	
R _{JA}	Thermal Resistance from Junction to Ambient	200	°C/W	
T _j	Junction Temperature	150	°C	
T _{stg}	Storage Temperature	-55~+150	°C	

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BC556/BC557/BC558

ELECTRICAL CHARACTERISTICS (@ Ta=25 °C unless otherwise specified)

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC556	$V_{(BR)CBO}$	$I_C = -0.1mA, I_E = 0$	-80			V
	BC557			-50			
	BC558			-30			
Collector-emitter breakdown voltage	BC556	$V_{(BR)CEO}$	$I_C = -2mA, I_B = 0$	-65			V
	BC557			-45			
	BC558			-30			
Emitter-base breakdown voltage		$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector cut-off current	BC556	I_{CBO}	$V_{CB} = -70V, I_E = 0$			-0.1	μA
	BC557		$V_{CB} = -45V, I_E = 0$			-0.1	μA
	BC558		$V_{CB} = -25V, I_E = 0$			-0.1	μA
Collector cut-off current	BC556	I_{CEO}	$V_{CE} = -60V, I_B = 0$			-0.1	μA
	BC557		$V_{CE} = -40V, I_B = 0$			-0.1	μA
	BC558		$V_{CE} = -25V, I_B = 0$			-0.1	μA
Emitter cut-off current		I_{EBO}	$V_{EB} = -5V, I_C = 0$			-0.1	μA
DC current gain		h_{FE}^*	$V_{CE} = -5V, I_C = -2mA$	120		800	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = -10mA, I_B = -0.5mA$			-0.3	V
			$I_C = -100mA, I_B = -5mA$			-0.65	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = -10mA, I_B = -0.5mA$			-0.8	V
			$I_C = -100mA, I_B = -5mA$			-1	V
Base-emitter voltage		V_{BE}	$V_{CE} = -5V, I_C = -2mA$	-0.55		-0.7	V
			$V_{CE} = -5V, I_C = -10mA$			-0.82	V
Collector output capacitance		C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$			6	pF
Transition frequency	BC556	f_T	$V_{CE} = -5V, I_C = -10mA, f = 100MHz$		150		MHz
	BC557				150		MHz
	BC558				150		MHz

CLASSIFICATION of h_{FE}

RANK	A	B	C
RANGE	110-220	180-460	420-800

BC556/BC557/BC558 Typical Characteristics

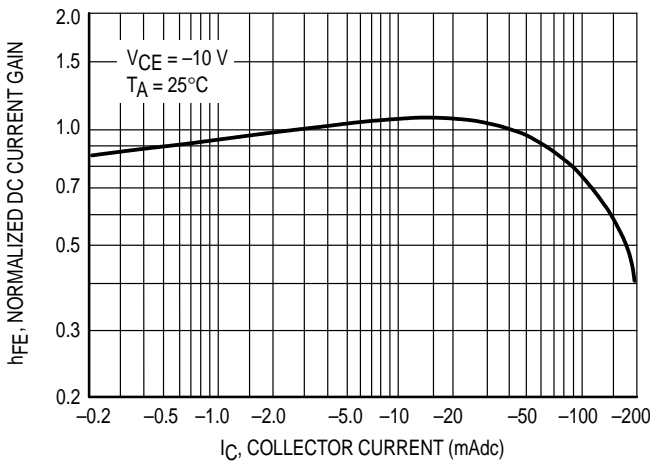


Figure 1. Normalized DC Current Gain

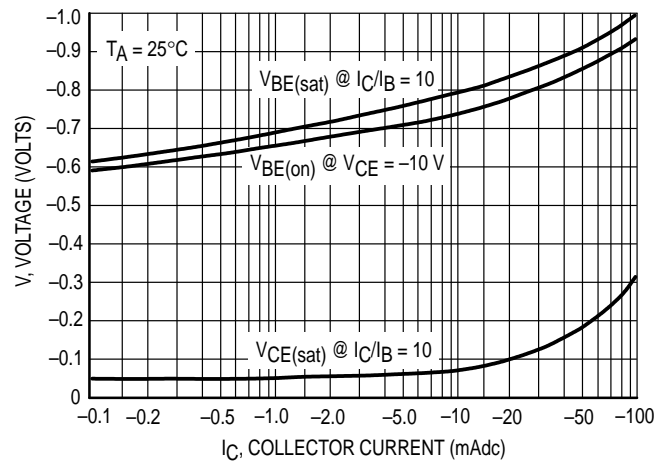


Figure 2. "Saturation" and "On" Voltages

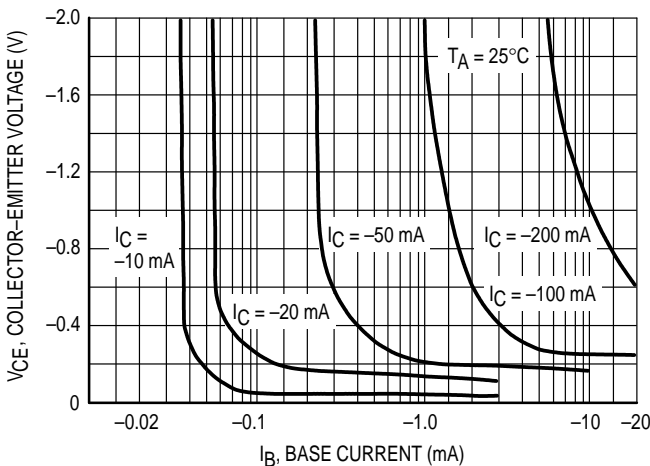


Figure 3. Collector Saturation Region

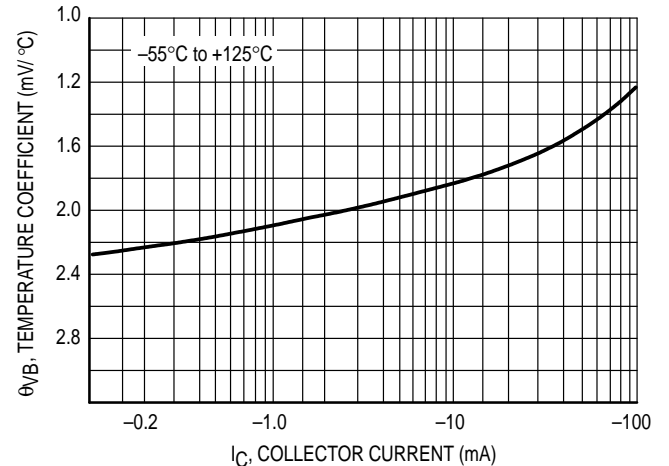


Figure 4. Base-Emitter Temperature Coefficient

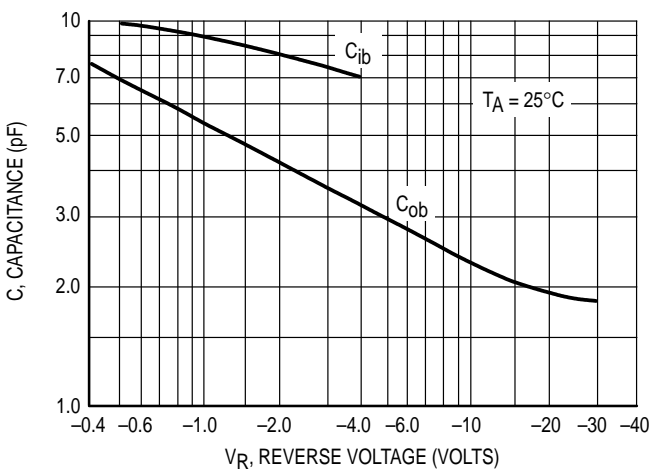


Figure 5. Capacitances

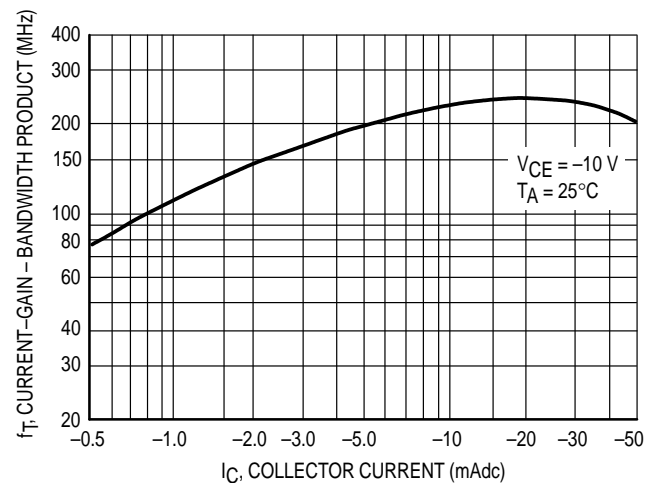


Figure 6. Current-Gain - Bandwidth Product

BC556/BC557/BC558 Typical Characteristics

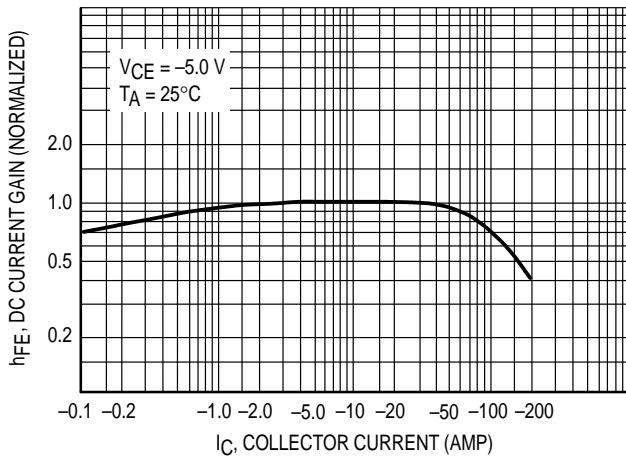


Figure 7. DC Current Gain

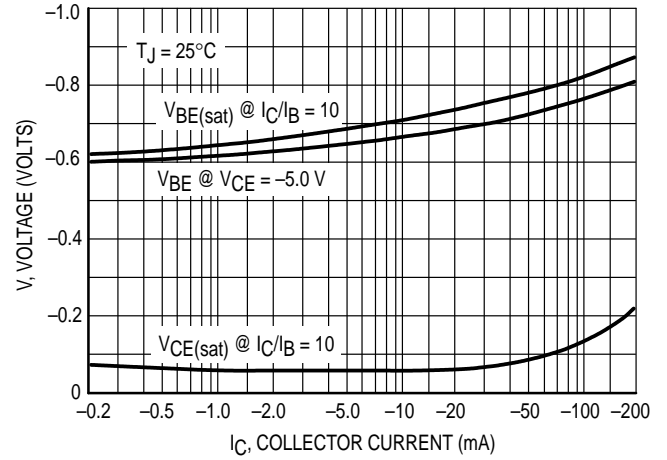


Figure 8. "On" Voltage

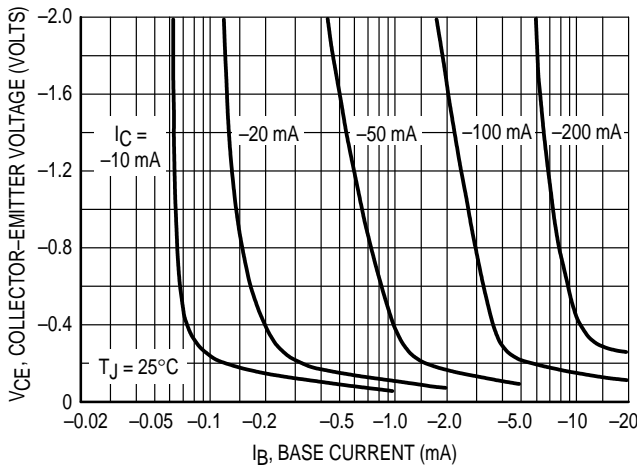


Figure 9. Collector Saturation Region

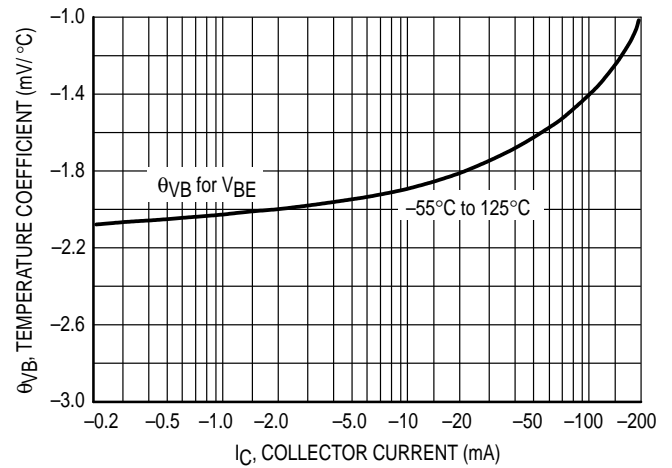


Figure 10. Base-Emitter Temperature Coefficient

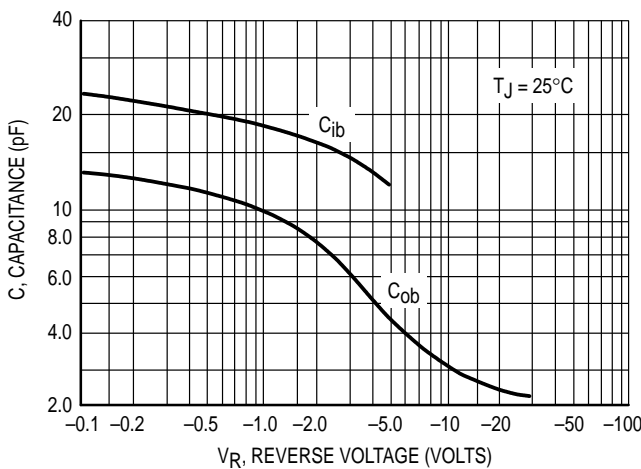


Figure 11. Capacitance

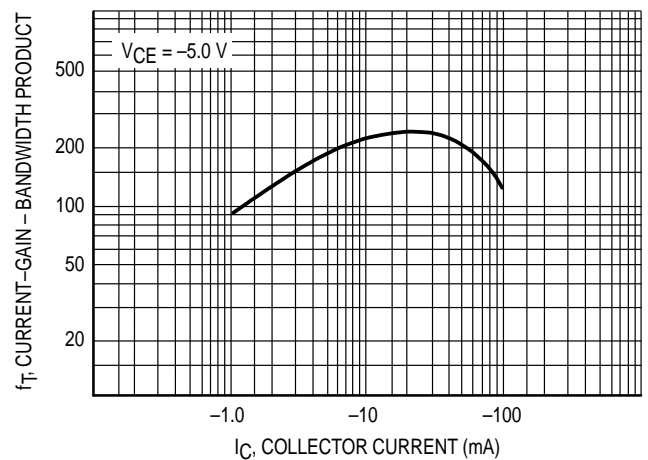


Figure 12. Current-Gain - Bandwidth Product