SOT-23 Plastic-Encapsulate Transistors

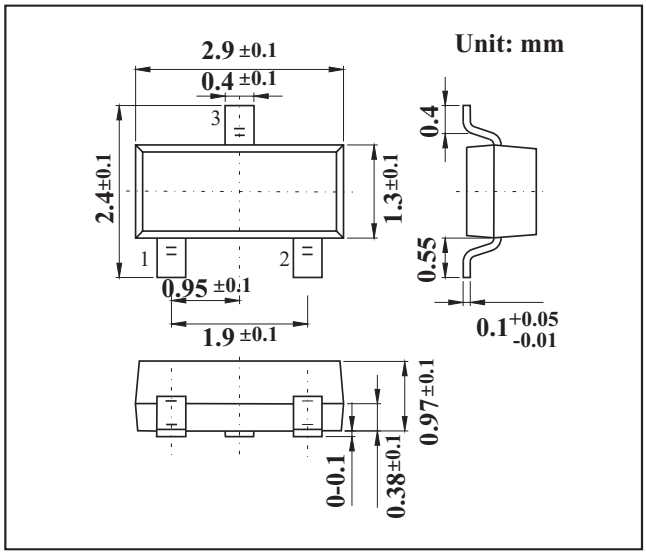
Features

●PNP Epitaxial Silicon Transistor

MECHANICAL DATA

●Case style:SOT-23molded plastic

●Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-32	V
Collector-Emitter Voltage	V_{CEO}	-32	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-100	mA
Collector Power Dissipation	P_C	350	mW
Storage Temperature	T_{STG}	-55 to +150	℃

PACKAGE INFORMATION

Device	Package	Shipping
BCW61A/B/C/D	SOT-23	3000/Tape&Reel

Parameter		Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current		I_{CBO}	I_E = 0; V_{CB} = -32 V			-20	nA
		I_{CBO}	I_E = 0; V_{CB} = -32 V; T_{amb} = 150 ℃			-20	μA
Emitter cutoff current		I_{EBO}	I_C = 0; V_{EB} = -4 V			-20	nA
DC current gain	BCW61B	h_{FE}	I_C = -10μA; V_{CE} = -5 V	30			
	BCW61C			40			
	BCW61D			100			
DC current gain	BCW61B	h_{FE}	I_C = -2 mA; V_{CE} = -5 V	180		310	
	BCW61C			250		460	
	BCW61D			380		630	
DC current gain	BCW61B	h_{FE}	I_C = -50 mA; V_{CE} = -5 V	80			
	BCW61C			100			
	BCW61D			110			
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C = -10 mA; I_B = -0.25 mA	-60		-250	mV
			I_C = -50 mA; I_B = -1.25 mA	-120		-550	mV
Base to emitter saturation voltage		$V_{BE(sat)}$	I_C = -10 mA; I_B = -0.25 mA	-600		-850	mV
			I_C = -50 mA; I_B = -1.25 mA	-0.68		-1.05	V
Base to emitter voltage		V_{BE}	I_C = -2 mA; V_{CE} = -5 V	-600	-650	-750	mV
Collector capacitance		C_C	I_E = ie = 0; V_{CB} = -10 V; f = 1 MHz		4.5		pF
Emitter capacitance		C_e	I_C = ic = 0; V_{EB} = -0.5 V; f = 1 MHz		11		pF
Transition frequency *		f_T	I_C = -10 mA; V_{CE} = -5 V; f = 100 MHz	100			MHz
Noise figure		NF	I_C = -200 μA; V_{CE} = -5 V; R_S = 2 kΩ; f = 1 kHz; B = 200 Hz		2	6	dB

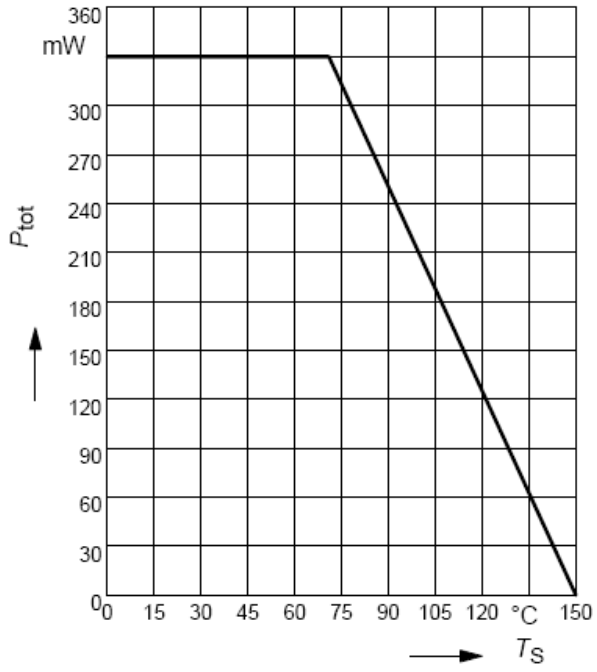
* Pulse test: tp ⩽ 300 μs; d ⩽ 0.02.

■ Marking

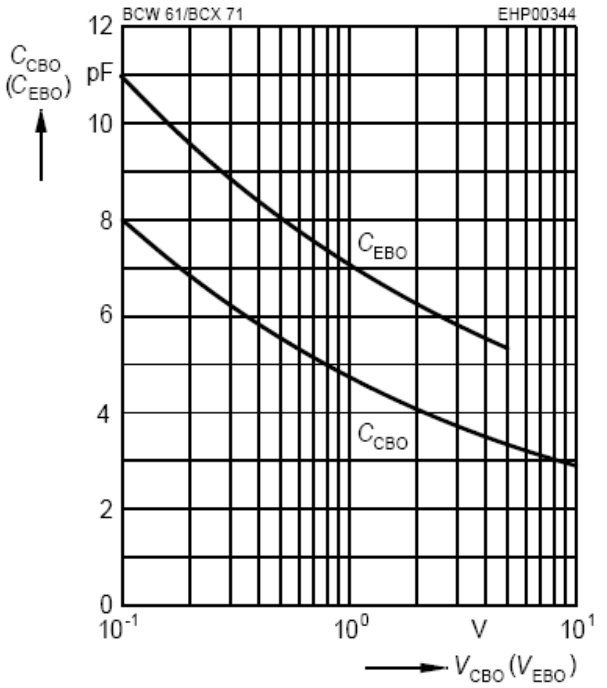
TYPE	BCW61A	BCW61B	BCW61C	BCW61D
Marking	BA	BB	BC	BD

RATINGS AND CHARACTERISTIC CURVES

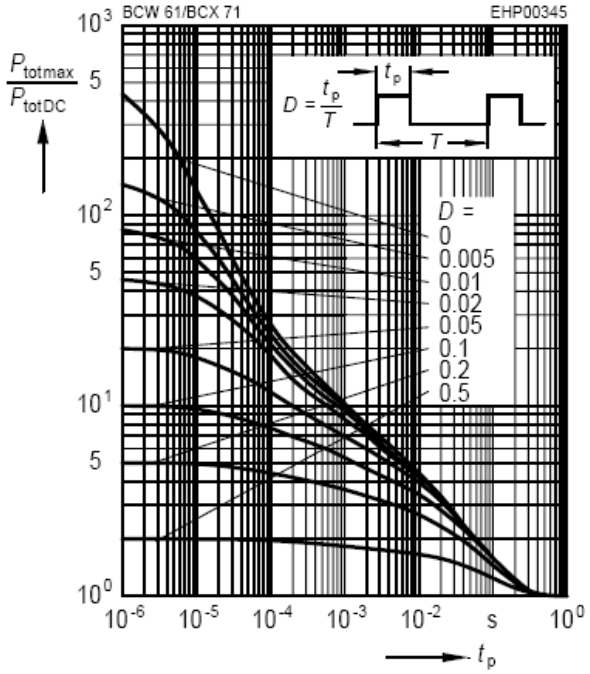
Total power dissipation $P_{tot} = f(T_S)$



Collector-base capacitance $C_{CB} = f(V_{CBO}$
Emitter-base capacitance $C_{EB} = f(V_{EBO})$



Permissible pulse load
$P_{totmax} / P_{totDC} = f(t_p)$



Transition frequency $f_T = f(I_C)$
$V_{CE} = 5V$