

BCW60

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ C$ unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	32			V	$I_C=2mA$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_{EBO}=1\mu A$
Collector-Emitter Cut-off Current	I_{CES}			20 20	nA μA	$V_{CES}=32V$ $V_{CES}=32V, T_{amb}=150^\circ C$
Emitter-Base Cut-Off Current	I_{EBO}			20	nA	$V_{EBO}=4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.12 0.20	0.35 0.55	V V	$I_C=10mA, I_B=0.25mA$ $I_C=50mA, I_B=1.25mA$
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	0.60 0.70	0.70 0.83	0.85 1.05	V V	$I_C=10mA, I_B=0.25mA$ $I_C=50mA, I_B=1.25mA$
Base - Emitter Voltage	V_{BE}	0.55	0.52 0.65 0.78	0.75	V V V	$I_C=10\mu A, V_{CE}=5V$ $I_C=2mA, V_{CE}=5V$ $I_C=50mA, V_{CE}=1V$
Static BCW60A Forward Current Transfer Ratio	h_{FE}	120 50	78 170	220		$I_C=10\mu A, V_{CE}=5V$ $I_C=2mA, V_{CE}=5V$ $I_C=50mA, V_{CE}=1V$
BCW60C		20 180 70	145 250	310		$I_C=10\mu A, V_{CE}=5V$ $I_C=2mA, V_{CE}=5V$ $I_C=50mA, V_{CE}=1V$
BCW60D		40 250 90	220 350	460		$I_C=10\mu A, V_{CE}=5V$ $I_C=2mA, V_{CE}=5V$ $I_C=50mA, V_{CE}=1V$
Transition Frequency	f_T	125	250		MHz	$I_C=10mA, V_{CE}=5V$ $f=100MHz$
Emitter-Base Capacitance	C_{ebo}		8		pF	$V_{EBO}=0.5V, f=1MHz$
Collector-Base Capacitance	C_{cbo}			4.5	pF	$V_{CBO}=10V, f=1MHz$
Noise Figure	N		2	6	dB	$I_C=0.2mA, V_{CE}=5V$ $R_G=2K\Omega, f=1KH$ $\Delta f=200Hz$
Switching times: Delay Time Rise Time Turn-on Time Storage Time Fall Time Turn-Off Time	t_d t_r t_{on} t_s t_f t_{off}		35 50 85 400 80 480	150	ns ns ns ns ns ns	$I_C \cdot I_{B1} - I_{B2} = 10:1:1mA$ $R_1=5K\Omega, R_2=5K\Omega$ $V_{BB}=3.6V, R_L=990\Omega$

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle Spice parameter data is available upon request for this device