SOT23 NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

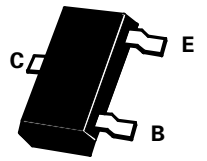
BCW66

ISSUE 4 - MARCH 2001

PARTMARKING DETAILS –

BCW66F –	EF	BCW66FR –	7P
BCW66G –	EG	BCW66GR –	5T
BCW66H –	EH	BCW66HR –	7M

COMPLEMENTARY TYPE – BCW68



SOT23

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Continuous Collector Current	I_C	800	mA
Peak Collector Current(10ms)	I_{CM}	1000	mA
Base Current	I_B	100	mA
Power Dissipation at T_{amb}=25°C	P_{tot}	330	mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	°C

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ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER		SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	45			V	I_{CEO}=10mA
		$V_{(BR)CES}$	75			V	IC=10μA
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	5			V	I_{EBO} =10μA
Collector-Emitter Cut-off Current		I_{CES}			20 20	nA μA	V_{CES} = 45V V_{CES} = 45V, T_{amb}=150°C
Emitter-Base Cut-Off Current		I_{EBO}			20	nA	V_{EBO} =4V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$			0.3 0.7	V V	I_C=100mA, I_B = 10mA I_C= 500mA, I_B = 50mA*
Base-Emitter Saturation Voltage		$V_{BE(sat)}$			2	V	I_C=500mA, I_B=50mA*
Static Forward Current Transfer	BCW66F	h_{FE}	75 100 35	160	250		I_C= 10mA, V_{CE} = 1V I_C=100mA, V_{CE}= 1V* I_C=500mA, V_{CE}= 2V*
	BCW66G	h_{FE}	110 160 60	250	400		I_C= 10mA, V_{CE} = 1V I_C=100mA, V_{CE}= 1V* I_C=500mA, V_{CE}= 2V*
	BCW66H	h_{FE}	180 250 100	350	630		I_C= 10mA, V_{CE} = 1V I_C=100mA, V_{CE}= 1V* I_C=500mA, V_{CE}= 2V*
Transition Frequency		f_T	100			MHz	I_C =20mA, V_{CE} =10V f = 100MHz
Output Capacitance		C_{obo}		8	12	pF	V_{CB}=10V, f=1MHz
Input Capacitance		C_{ibo}			80	pF	V_{EB}=0.5V, f=1MHz
Noise Figure		N		2	10	dB	I_C= 0.2mA, V_{CE} = 5V R_G =1kΩ
Switching times: Turn-On Time Turn-Off Time		 t_{on} t_{off}			 100 400	 ns ns	 I_C=150mA I_{B1}=- I_{B2} =15mA R_L=150Ω

Spice parameter data is available upon request for this device
*Measured under pulsed conditions.

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