

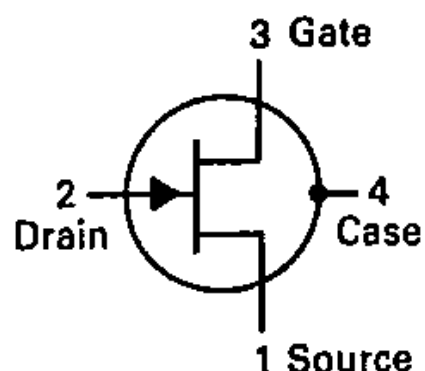
BFW10 – BFW11

N CHANNEL SILICON FETS

DESCRIPTION :

Symmetrical N-CHANNEL silicon planar epitaxial junction field-effect transistors in TO72 metal envelopes with the shield lead connected to the case. They are designed for broad band amplifiers (0 to 300 MHz).

Their very low frequencies makes these devices very suitable for differential amplifiers, electro-medical and nuclear detector preamplifiers.



ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit
V_{DS}	Drain-Source Voltage	30	V
$-V_{GSO}$	Gate-Source Voltage (Open Drain)	30	V
V_{DGO}	Drain-Gate Voltage (Open Source)	30	V
I_{DS}	Drain Current	20	mA
I_G	Gate Current	10	mA
P_{tot}	Total Power Dissipation at $T_{amb} = 25^{\circ}C$	250	mW
T_{stg}	Storage Temperature Range	-65 to 175	$^{\circ}C$
T_j	Junction Temperature	175	$^{\circ}C$

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJA}	Thermal Resistance, junction-ambient	590	K/W

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ELECTRICAL CHARACTERISTICS

$T_j = 25^\circ\text{C}$ unless otherwise specified

Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
$-I_{GSS}$	Gate Cutoff Current	$-V_{GS} = 20V$ $V_{DS} = 0$	BFW10	-	-	0.1	nA
			BFW11				
		$-V_{GS} = 20V ; V_{DS} = 0$ $T_j = 150^\circ\text{C}$	BFW10	-	-	0.5	μA
			BFW11				
I_{DSS}	Drain Current	$V_{DS} = 15V$ $V_{GS} = 0$	BFW10	8	-	20	mA
			BFW11	4	-	10	
$-V_{GS}$	Gate Source Voltage	$V_{DS} = 15V$	$I_D = 400\mu\text{A}$ BFW10	2	-	7.5	V
			$I_D = 50\mu\text{A}$ BFW11	1.25	-	4	
$-V_{(P)GS}$	Gate Source Cutoff Voltage	$V_{DS} = 15V$ $I_D = 0.5\text{nA}$	BFW10	-	-	8	V
			BFW11	-	-	6	

SMALL SIGNAL CHARACTERISTICS

$T_j = 25^\circ\text{C}$ unless otherwise specified

Symbol	Ratings	Test Condition(s)		Min	Typ	Mx	Unit
Y_{fs}	Transfer admittance	$V_{DS} = 15V$ $V_{GS} = 0$ $f = 1\text{kHz}$	BFW10	3.5	-	6.5	mS
			BFW11	3	-	6.5	
		$V_{DS} = 15V$ $V_{GS} = 0$ $f = 200\text{MHz}$	BFW10	3.2	-	-	
			BFW11				
Y_{os}	Output admittance	$V_{DS} = 15V$ $V_{GS} = 0$ $f = 1\text{MHz}$	BFW10	-	-	85	
			BFW11	-	-	50	
C_{is}	Input Capacitance	$V_{DS} = 15V$ $V_{GS} = 0$ $f = 1\text{MHz}$	BFW10	-	4	5	pF
			BFW11				
C_{rs}	Feedback Capacitance	$V_{DS} = 15V$ $V_{GS} = 0$ $f = 1\text{MHz}$	BFW10	-			
			BFW11				
NF	Noise Figure	$V_{DS} = 15V$ $V_{GS} = 0$	BFW10	-	-	2.5	dB
			BFW11				

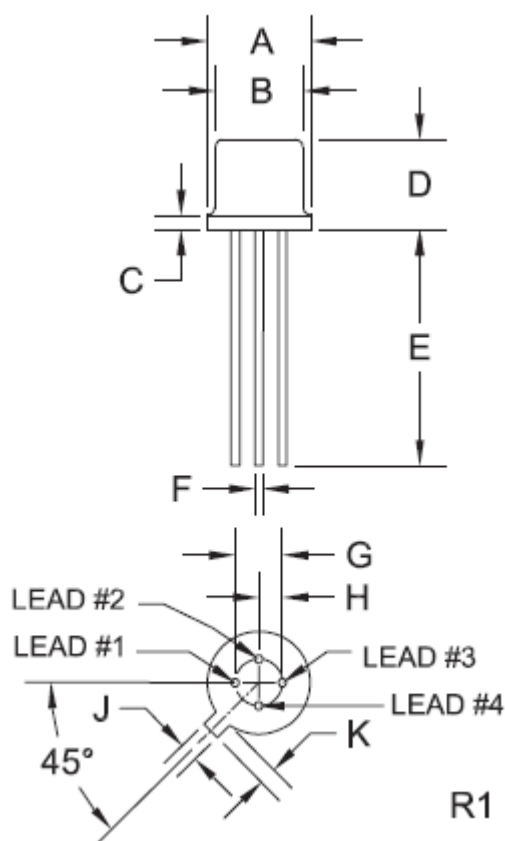


BFW10 – BFW11

MECHANICAL DATA CASE TO-72

DIMENSIONS		
	mm	
	min	max
A	5.31	5.84
B	4.45	4.95
C	-	0.76
D	4.32	5.33
E	12.7	-
F	0.41	0.48
G	2.54	
H	1.27	
J	0.91	1.17
K	0.71	1.22

Pin 1 :	Emitter
Pin 2 :	Base
Pin 3 :	Collector
Pin 4 :	Case



Revised August 2014

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