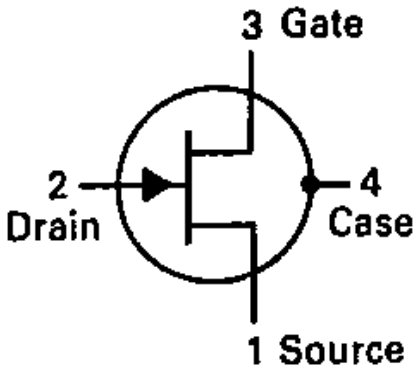
BFW10 – BFW11

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 differencial 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°C	250	mW
T_{stg}	Storage Temperature Range	-65 to 175	°C
T_j	Junction Temperature	175	°C

THERMAL CHARACTERISTICS

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

COMSET SEMICONDUCTORS

BFW10 – BFW11

ELECTRICAL CHARACTERISTICS

T_j = 25°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°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= 400µA	BFW10	2	-	7.5	V
			I_D= 50µA	BFW11	1.25	-	4	
$-V_{(P)GS}$	Gate Source Cutoff Voltage	V_{DS} = 15V I_D= 0.5nA		BFW10	-	-	8	V
				BFW11	-	-	6	

SMALL SIGNAL CHARACTERISTICS

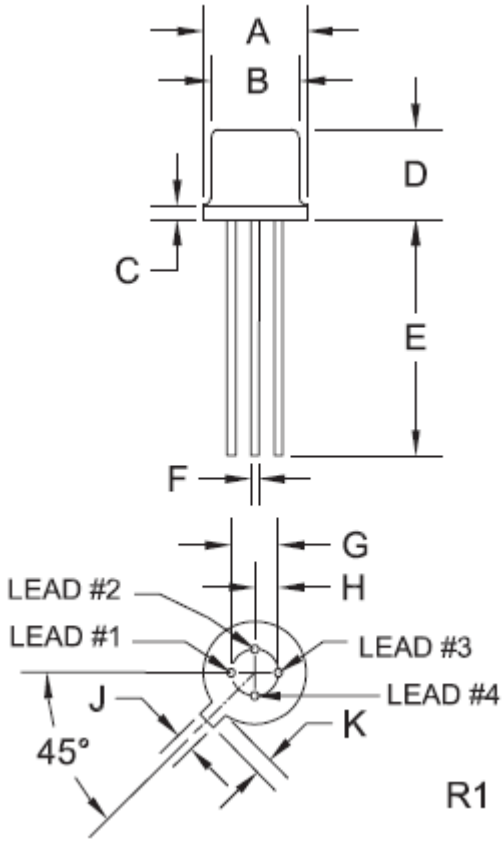
Tj = 25°C unless otherwise specified

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