

NPN BFW16A

N-P-N H.F. WIDEBAND TRANSISTOR

The BFW16A is NPN multi-emitter transistor in a TO-39 metal envelope, with the collector connected to the case. The transistor has extremely good intermodulation properties and a high power gain. It is a ruggedized version of the BFW16, which it succeeds.

It is primarily intended for :

- Final and driver stages of channel and band aerial amplifiers with high output power for bands I , II , III , IV , V (40-860 MHz).
- Final stage of the wideband vertical amplifier in high speed oscilloscopes.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit
V_{CEO}	Collector-Emitter Voltage $I_B = 0$	25	V
V_{CBOM}	Collector-Base Voltage (open emitter ; peak value) $I_E = 0$	40	V
V_{EBO}	Emitter-Base Voltage $I_C = 0$	2	V
V_{CERM}	Collector-Emitter Voltage ($R_{BE} \leq 50\Omega$)	40	V
I_C	Collector Current	150	mA
I_{CM}	Collector Peak Current	300	mA
P_t	Total Power Dissipation @ $T_C = 125^\circ$	1.5	Watts

Symbol	Ratings	Value	Unit
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{Stg}	Storage Temperature	-65 to +200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJa}	Thermal Resistance, Junction to Ambient	250	K/W
R_{thJmb}	Thermal Resistance, Junction to Mounting Base	50	K/W
$R_{thJmb-h}$	Thermal Resistance, Junction to Mounting Base to heatsink	1.2	K/W

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ELECTRICAL CHARACTERISTICS

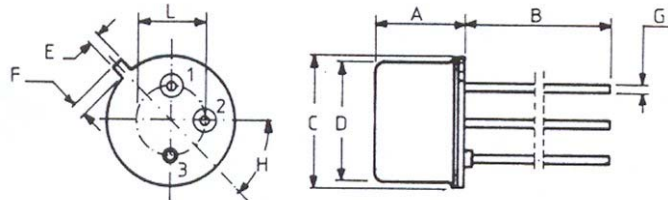
TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
I_{CB0}	Collector Cutoff Current	$I_E=0A, V_{CB}=20V; T_J=150^\circ C$	-	-	20	μA
h_{FE}	DC Current Gain (1)	$I_C=50mA, V_{CE}=5.0V$	25	-	-	-
		$I_C=150mA, V_{CE}=5.0V$	25	-	-	

Symbol	Ratings	Test Condition(s)Sec	Min	Typ	Mx	Unit	
f_T	Transition frequency	$V_{CE}=15V, I_C=150mA, f=500MHz$	-	1.2	-	GHz	
C_C	Collector capacitance at f=1MHz	$I_E=I_e=0; V_{CB}=15V$	-	-	4	pF	
C_{re}	Feedback capacitance at f=1MHz	$I_C=10mA; V_{CE}=15V; T_{amb}=25^\circ C$	-	1.7	-		
F	Noise figure at f= 200 MHz	$I_C=30mA; V_{CE}=15V; Z_S=75\Omega; T_{amb}=25^\circ C$	-	-	6	dB	
G_P	Power gain (not neutralized)	$I_C=70mA; V_{CE}=18V; T_{amb}=25^\circ C$	200 MHz	-	16	-	dB
			800 MHz	-	6.5	-	

MECHANICAL DATA CASE TO-39

	DIMENSIONS			
	mm		inches	
	min	max	min	max
A	-	6.6	-	0.260
B	12.7	-	0.500	-
C	-	9.4	-	0.370
D	-	8.5	-	0.334
E	-	0.9	-	0.035
F	-	1.2	-	0.047
G	-	0.49	-	0.019
H	45° typ		45° typ	
L	5.08 typ		0.200 typ	



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

Information furnished is believed to be accurate and reliable. However, CS assumes no responsibility for the consequences of use of such information nor for errors that could appear.

Data are subject to change without notice.