NPN BFW16A

HF WIDEBAND TRANSISTORS

The BFW16A is NPN multi-emitter transistor in a TO-39 metal envolope, 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 succeds.
It is primarily intended for :
•Final and driver stages of channel and band aerial amplifiers with high outpout power for bands I , II , III , IV , V (40-860 MHz).
•Final stage of the wideband vertical amplifier in high speed oscilloscopes.
Compliance to RoHS.

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}<=50Ω	40	V
I_C	Collector Current		150	mA
I_{CM}	Collector Peak Current		300	mA
Pt	Total Power Dissipation	@ T_C = 125°	1.5	W
T_J	*Junction Temperature*		200	°C
T_{Stg}	Storage Temperature		-65 to +200	°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	Max	Unit
I_{CB0}	Collector Cutoff Current	I_E=0, V_{CB}=20 V, T_J=150°C		-	-	20	µA
h_{FE}	DC Current Gain	I_C=50 m A, V_{CE}=5.0 V		25	-	-	-
		I_C=150 mA, V_{CE}=5.0 V		25	-	-	
f_T	Transition frequency	V_{CE}=15 V, I_C=150 mA f=500 MHz		-	1.2	-	GHz
C_C	Collector capacitance at f=1MHz	I_E= I_e = 0, V_{CB}=15 V		-	-	4	pF
Cre	Feedback capacitance at f=1MHz	I_C= 10 mA, V_{CE}=15 V T_{amb}= 25°C		-	1.7	-	
F	Noise figure at f= 200 MHz	I_C= 30 mA, V_{CE}=15 V Z_S= 75 Ω, T_{amb}= 25°C		-	-	6	dB
G_P	Power gain (not neutralized)	I_C= 70 mA V_{CE}=18 V T_{amb}= 25°C	200 MHz	-	16	-	dB
			800 MHz	-	6.5	-	

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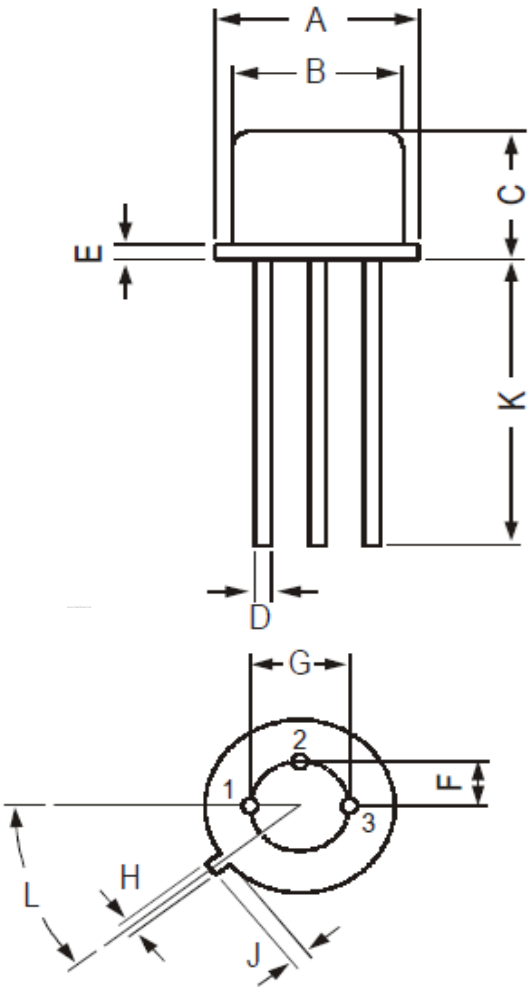
MECHANICAL DATA CASE TO-39

DIMENSIONS (mm)		
	min	max
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	-	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	-
L	42°	48°



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

Revised September 2012