

BF AND BFH TYPES

BF and BFH are the improved versions with the features of our ceramic resistors well accepted in the market for a long time. The processes in ceramic tubing coating with the ceramic film, sintering at a high temperature and helical cutting have simplified the production of resistors with a large resistance capacity and a high accuracy. Compared with conventional film resistors, BF and BFH have much larger allowable injection energy capacity and provide higher voltage characteristics which are the ideal to the application shown right.



TYPICAL APPLICATIONS:

Surge absorber, SR element protection, Electric field intensity regulator, Capacitor charger, High voltage equipment loader, Charging resistor for impulse generator, High voltage and high resistance circuits

CHARACTERISTICS:

Item	BF,BFH Characteristics
Working temperature:	180°C
Temperature coefficient:	-0.17%/C Max
Withstand voltage:	2.5 kV/cm Max (BF)
(1.2 x 50 μs)	5.0 kV/cm Max (BFH)

Item	BF,BFH Characteristics
Loaded service life (500 hrs rated load)	±5% Max
Short-time overload test:	±2% Max
Max operating temperature:	200°C

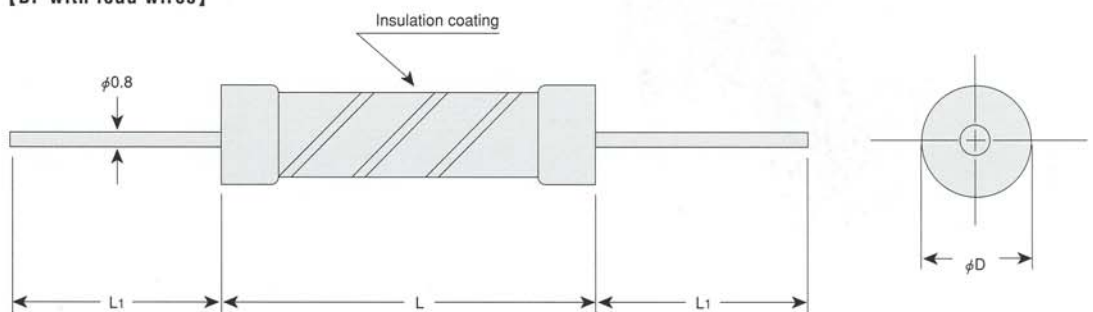
BF STANDARD SPECIFICATIONS:

Type No.	Rated Power (W)	Dimensions (mm)				Max Voltage (kV)	Resistance Value Range (Ω)	Allowable Injection Energy (J)
		φ D	φ d	L	L ₁			
ER 5BF	5	8.5±0.5	—	60±2.0	38±2	1.5	50k~20M	9
ER 10BF	10	14±0.5	8	80±1.5	10±2	2.5	50k~20M	18
ER 20BF	20	20±1.0	14	100±1.5	13±2	3.0	50k~20M	32
ER 30BF	30	20±1.0	14	150±1.5	15±2	4.5	50k~20M	52
ER 40BF	40	20±1.0	14	200±1.5	15±2	6.5	50k~20M	75
ER 70BF	70	25±1.2	17	250±2.0	22±2	8.5	50k~20M	113
ER 80BF	80	25±1.2	17	300±2.0	22±2	10.0	50k~20M	140

● ER5BF will be supplied with lead wires.

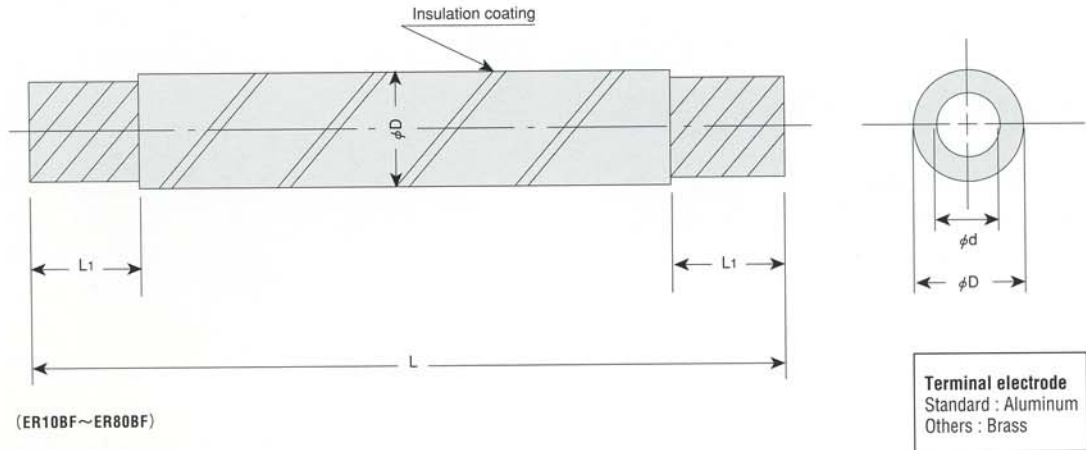
● ER10BF through ER80BF will be supplied with terminals as option, if so requested with an order. (The details on the terminals are shown at page 12).

[BF with lead wires]



(ER5BF)

[BF without terminal]



BFH STANDARD SPECIFICATIONS (High Withstand Resistance Type):

Type No.	Rated Power (W)	Dimensions (mm)					Max Impulse Voltage (kV) 1.2X50 μ s	Resistance Value Range (Ω)	Allowable Injection Energy (J)
		ϕD	$\phi D1$	ϕd	L	L_1			
ER 10BFH	10	14 \pm 0.5	16	M4	90	15	30	250k~20M	18
ER 20BFH	20	20 \pm 1.0	22	M4	110	18	35	250k~20M	32
ER 30BFH	30	20 \pm 1.0	22	M4	160	20	60	250k~20M	52
ER 40BFH	40	20 \pm 1.0	22	M4	210	20	80	250k~20M	75
ER 70BFH	70	25 \pm 1.2	28	M4	260	26	100	250k~20M	113
ER 80BFH	80	25 \pm 1.2	28	M4	310	26	120	250k~20M	140

[BFH (High withstand resistance type)]

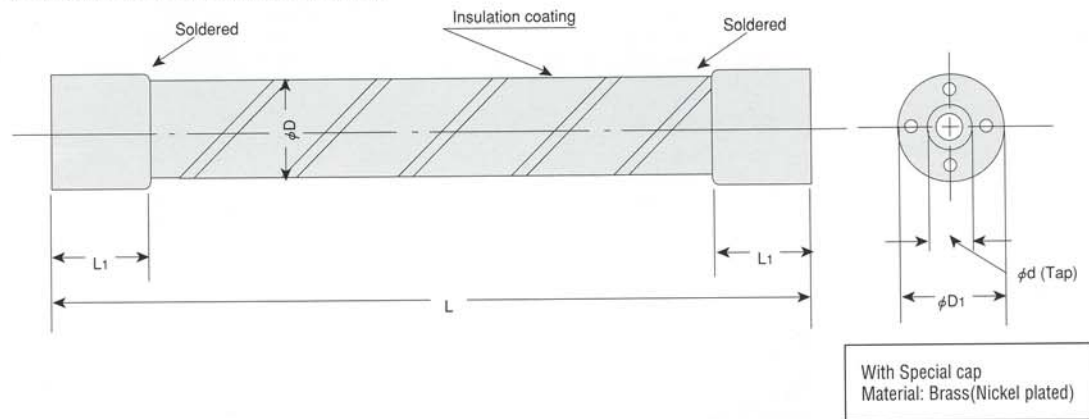


Fig.21 BF Derating Curve

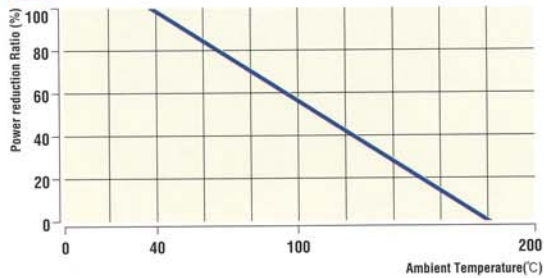


Fig.22 BF Power vs. Surface Temperature Increase

