



AS Series

Data Sheet

January 1998

File Number 2492.4

High Energy Metal-Oxide Arrester Blocks

The AS Series of Arrester blocks is primarily designed to be used as the surge suppression element within a lightning arrester assembly. These arrester blocks provide the high peak surge current and energy ratings required for the protection of high voltage AC power utility distribution systems. Typically, these devices are placed within a special arrester housing provided by the customer, and stacked to achieve the necessary continuous working voltage ratings for the specific application. (See the CA or NA series of Varistor discs for lower voltage and energy applications.)

Features

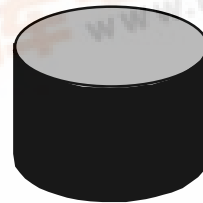
- Provided in Disc Form for Unique Packaging by Customer
- Electrode Finish Enables Pressure Contact for Stacking Application
- Available Disc Sizes: 32mm, 42mm and 60mm Diameter
- No Follow Current
- High Surge Current Capability
- Conforms to IEC 99-4 and ANSI/IEEE C62.11 Industry Standards
- Characterized for Lightning Arrester Parameters

Applications

- Lightning Protection of Electrical AC Distribution Transformers and Systems
- Arrester Assemblies of the Porcelain Polymeric, "Under-oil" and Metal Clad Variety

Packaging

AS SERIES



**Not Recommended
For New Designs –
Product Series Has
Been Discontinued
With No Replacement**

OBSOLETE PART

AS Series

Absolute Maximum Ratings For ratings of individual members of a series, see Device Ratings and Specifications chart

	AS SERIES	UNITS
Rated Voltage		
AC Voltage Range	3.00 to 6.00	kV
Steady State Applied Voltage		
AC Voltage (MCOV)	2.55 to 5.10	kV
Transient		
Peak Pulse Current (I_{TM}) for 4/10 μ s Current Wave	65 to 100	kA
Energy Rating for 2ms Current Wave	2.2 to 12	kJ
Operating Ambient Temperature (T_A)	60	$^{\circ}$ C

STORAGE AND HANDLING NOTES:

1. Arrester blocks should be stored in a moisture free environment at all times.
2. Use caution during handling to prevent damage or chipping of edges of the arrester blocks.

CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress only rating and operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied.

Device Ratings and Specifications 25 $^{\circ}$ C Unless Otherwise Specified

PARAMETER	PART NUMBER								UNITS
	V302AS32	V402AS32	V502AS32	V602AS32	V302AS42	V402AS42	V502AS42	V402AS60	
Rated Voltage (RMS)	3.0	4.0	5.0	6.0	3.0	4.0	5.0	4.0	kV
Maximum Continuous Operating Voltage (MCOV)	2.55	3.40	4.25	5.10	2.55	3.40	4.25	3.40	kV
Reference Current, I_{REF}	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	mA
Minimum Reference Voltage, V_{REF}	3.12	4.16	5.20	6.24	3.12	4.16	5.20	4.16	kV _{RMS}
Nominal Discharge Current, I_p (8/20 μ s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0	kA
Residual Voltage (Max) at I_p	9.8	13.3	16.3	19.2	10.0	13.3	16.7	12.5	kV
Energy Rating at 60 $^{\circ}$ C (2ms)	2.2	2.2	3.0	4.0	3.5	4.7	5.8	12.0	kJ
Peak Current, 4/10 μ s at 60 $^{\circ}$ C (Note 4)	65.0	65.0	65.0	65.0	100.0	100.0	100.0	100.0	kA
Maximum Steep Current Residual Voltage at 5kA (1/20 μ s)	11.3	15.0	18.8	22.5	-	-	-	-	kV
Maximum Steep Current Residual Voltage at 10kA (1/20 μ s)	-	-	-	-	11.5	15.3	19.2	14.4	kV
Maximum Dissipation Power at MCOV	0.23	0.30	0.38	0.45	0.36	0.48	0.60	0.50	W
Maximum Conduction Current at MCOV	75.0	75.0	75.0	75.0	110.0	110.0	110.0	140.0	μ A

NOTES:

3. In addition to above standard types, custom ratings and dimensions can be provided.
4. Parts should be wrapped using a secondary insulating film or encased by polymeric housing.

AS Series

Performance Curves

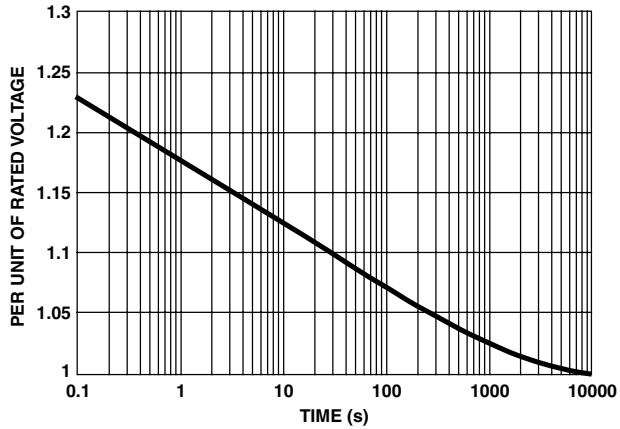


FIGURE 1. TEMPORARY OVERVOLTAGE CAPABILITY (TOV) FOR AS SERIES ARRESTERS

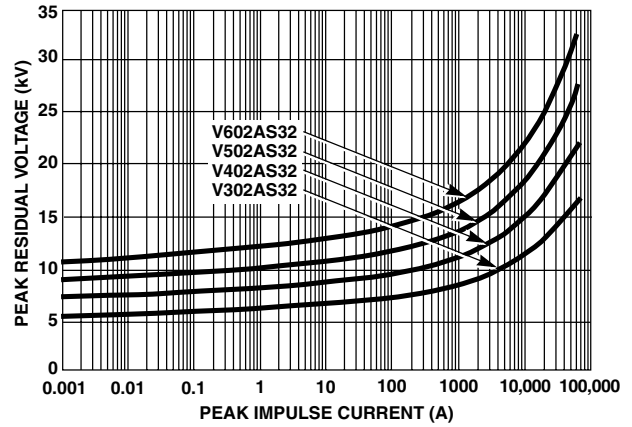


FIGURE 2. V-I CHARACTERISTIC AS32 SIZE

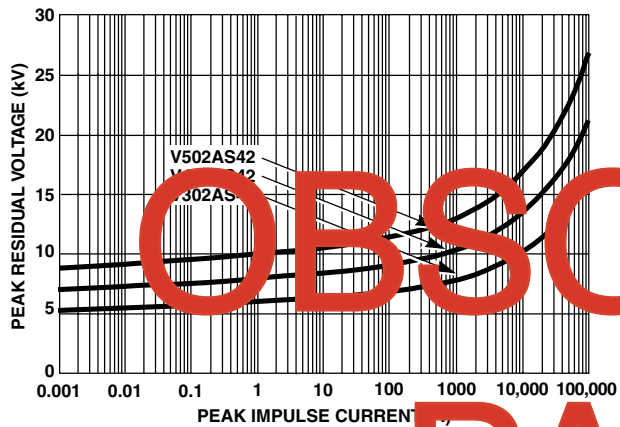


FIGURE 3. V-I CHARACTERISTIC AS42 SIZE

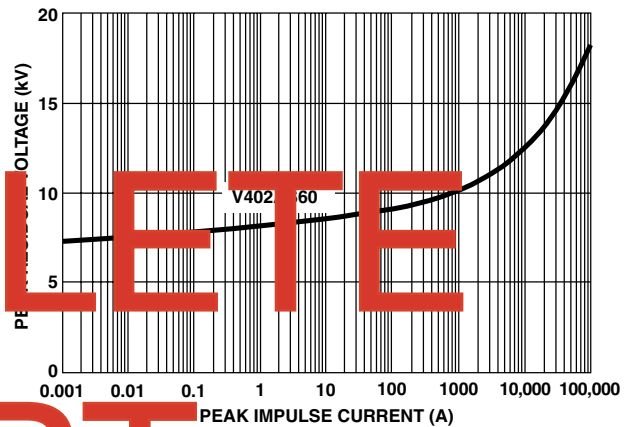
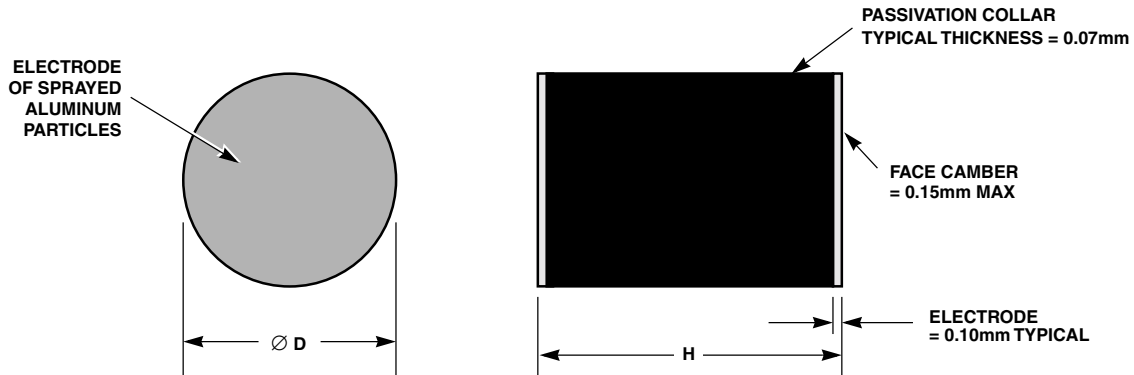


FIGURE 4. V-I CHARACTERISTIC AS60 SIZE

AS Series

Dimensions



DIMENSIONS (IN MILLIMETERS)

PARAMETER	PART NUMBER										UNITS
	V302AS32	V402AS32	V502AS32	V602AS32	V302AS42	V402AS42	V502AS42	V602AS42	V302AS60	V402AS60	
Diameter ($\varnothing D$)											
Min	33.2	32.5	32.5	32.5	42.3	40.9	40.9	40.9	62.0	62.0	mm
Max	33.7	33.7	33.7	33.7	42.3	42.3	42.3	42.3	62.0	62.0	mm
Height (H)											
Min	20.0	27.0	34.0	34.0	20.0	27.0	34.3	34.3	35.3	35.3	mm
Max	21.5	27.5	35.5	35.5	21.5	28.5	35.8	35.8	36.8	36.8	mm

Ordering Information

VXXX ASXX TYPES

