

PSP an ASP Ceramic Composition Resistors

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PSP& ASA Series Axial Leaded Non-Inductive Bulk Ceramic Resistors provide excellent performance where high peak power or high-energy pulses must be handled in a small size. The advantage of the bulk construction is that it produces an inherently non-inductive resistor; and it allows energy and power to be uniformly distributed through the entire ceramic resistor body - there is no film or wire to fail. We offer a full line of rugged, reliable ceramic resistors- including custom designs. two distinctly different ceramic materials are available in each size to afford the designer with unique components to meet the most demanding requirements.

ASA alternatives to hard to find carbon composition resistors, composition resistors can be used as drop-in replacements for 1 and 2 watt sizes. Much larger sizes, up to 70 watts in a single component, are available for new or redesigns where an array of smaller resistors may have been previously required.

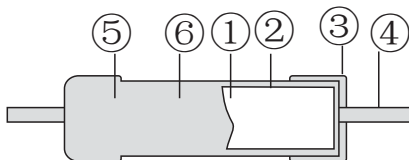
Features

- I Non-inductive “bulk ceramic” resistor
- II Uniform distribution of energy throughout resistor body
- III Replacement of Carbon Composition Resistors
- IV Large peak energy in small size
- V High power dissipation (Type PSP)
- VI High voltage and energy absorption (Type ASA)
- VII Through-hole or post mountable

Applications

PSP	<ul style="list-style-type: none"> • Soft Start/In-rush Limiters • RC Snubber Circuits • Spark-Gap Limiters • Parasitic Suppression • High Voltage Power Supplies • Pulse Waveform • EMI/EFI Test Circuits • RF Dummy Load Circuits • Capacitor Dump Circuits
Withstands high operating temperatures resulting in high power dissipation. Maximum continuous operating temperature is specified at 350°C . This type is suitable for use in oil without an oil-resistant coating.	
ASA	
Best suited for high energy and voltage pulse applications. Maximum continuous operating temperature is specified at 230°C The standard dielectric coating is recommended for use in air, and the oil-resistant coating is recommended for use in oil.	

Construction



①	Resistive body	④	Lead wire
②	Inner electrode	⑤	Coating
③	Electrode cap	⑥	Marking

Ordering Information

Example:

ASA	2.0	K	10R0
(1)	(2)	(3)	(4)
Series Name	Power Rating	Resistance Tolerance	Resistance

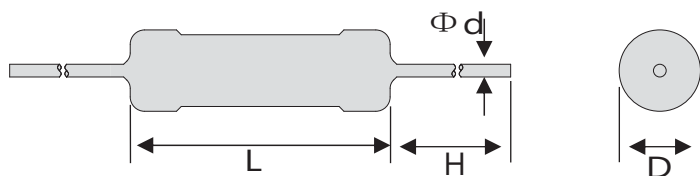
(1)Type: ASA an PSP SERIES

(2)Power Rating: 1.5=1.5W,2.0W=2.0W,2.5W=2.5W....10W=10W

(3)Tolerance: K=±10%,L=±20%

(4)Resistance Value:10R0=10Ω、100R0=100Ω

Dimensions

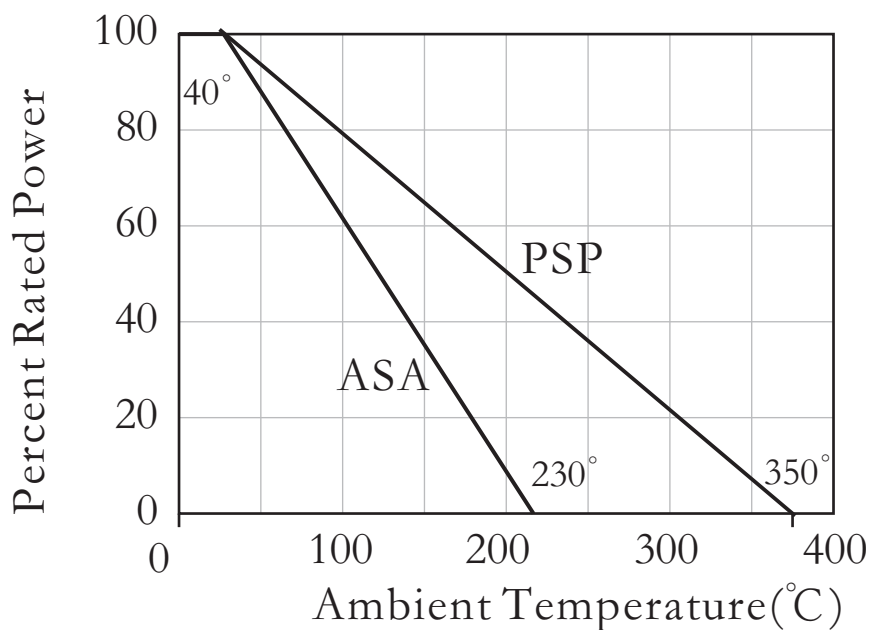


Type	power (W)	Dimensions(mm)			
		L max	Dmax	$\Phi d \pm 0.05$	$H \pm 3$
ASA	1.5W	19.1	5.1	1.0	30
PSP	2.5W				
ASA	2.0W	19.1	7.9	1.0	30
PSP	7.0W				
ASA	3.0W	28.6	7.9	1.0	30
PSP	10W				
ASA	2.5W	19.1	11.1	1.0	30
PSP	8.5W				
ASA	3.5W	28.6	11.1	1.0	30
PSP	12W				
ASA	5.0W	54	7.9	1.0	30
PSP	15W				
ASA	6W	54	11.1	1.0	30
PSP	18W				
ASA	9W	104.8	7.9	1.0	30
PSP	25W				
ASA	11W	104.8	11.1	1.0	30
PSP	31W				
ASA	13W	155.6	7.9	1.0	30
PSP	36W				
ASA	16W	155.6	11.1	1.0	30
PSP	45W				
ASA	20W	231.8	7.9	1.0	30
PSP	55W				
ASA	25W	231.8	11.1	1.0	30
PSP	70W				

Applications And Ratings

Type	power (W)	Resistance Ranges(Ω)	Rated peak energy ² (J)	Rated peak voltage ²	Rated peak current ³ (A)
ASA	1.5W	25-6350	75	1500V	90
PSP	2.5W	1-1000	15	375V	350
ASA	2.0W	6-1800	170	1100V	150
PSP	7.0W	1-120	20	375V	550
ASA	3.0W	12-5000	275	2500V	150
PSP	10W	1-330	30	500V	550
ASA	2.5W	4-1200	260	1500V	190
PSP	8.5W	1-150	20	375V	700
ASA	3.5W	8-2300	400	2500V	190
PSP	12W	1-330	30	500V	700
ASA	5.0W	30-9000	600	3000V	150
PSP	15W	1-700	50	1000V	550
ASA	6W	20-5800	900	3000V	190
PSP	18W	1-460	75	1000V	700
ASA	9W	55-18000	1200	9000V	150
PSP	25W	2-1500	95	3600V	550
ASA	11W	36-1200	1800	9000V	190
PSP	31W	2-1000	150	3600V	700
ASA	13W	90-30000	1900	15000V	150
PSP	36W	3-2400	155	5000V	550
ASA	16W	60-20000	2900	15000V	190
PSP	45W	2-1600	240	5000V	700
ASA	20W	150-48000	3000	25000V	150
PSP	55W	4-3800	250	8800V	550
ASA	25W	100-3200	4600	25000V	190
PSP	70W	3-2500	380	8800V	700

Derating Curve



Characteristics

Characteristic Test	Type PSP	Type ASA
Operating Temp.	-55°C to +350°C	-55°C to +350°C
Resistance Temp.Coefficient	+0.2 to -0.08 %/°C	+0.0 to -0.08 %/°C
Voltage Coefficient	-1.0%	-1.0%
Short Time Overload	± 5%	± 2%
Load Life	± 5%	± 5%
Thermal Shock	± 3%	± 3%
Moisture Resistance	± 5%	± 5%
Density	2.2-2.4 gm/cc	2.2-2.6 gm/cc
Specific Heat	0.24-0.26 cal/gm -°C	0.23-0.25 cal/gm -°C
Thermal Conductivity	0.14-0.16 cal/(cm-°C -sec)	0.003-0.006cal/(cm-°C -sec)