










SIOV metal oxide varistors

Overview of types

Date: April 2011

Overview of types

Disk varistors, monolithic, leaded


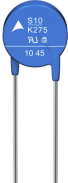




 					
Nominal diameter	5 mm		7 mm		10 mm
	Standard	AdvanceD	Standard	AdvanceD	Standard
	S05 page	S05 ... E2 page	S07 page	S07 ... E2 page	S10 page
Operating voltage V_{RMS}	11 ... 460 V	130 ... 300 V	11 ... 460 V	130 ... 320 V	11 ... 680 V
Surge current (8/20 μ s) i_{max}	100 ... 400 A	800 A	250 ... 1200 A	1750 A	500 ... 2500 A
Energy absorption (2 ms) W_{max}	0.3 ... 18 J	6.0 ... 15 J	0.8 ... 36 J	12.5 ... 32 J	1.7 ... 72 J
Automotive			S07AUTO page/		S10AUTO page/
Operating voltage V_{RMS}			14 V_{RMS} 48 $V_{DC}^{1)}$		14 ... 17 V_{RMS} 48 $V_{DC}^{1)}$
Surge current (8/20 μ s) i_{max}			250 A		500 A
Energy absorption (10 \times) W_{LD}			12.0 J		25.0 J
Telecom			S07(TELE) page		
Operating voltage V_{RMS}			60/ 95 V		
Surge current (8/20 μ s) i_{max}			1200 A		
Energy absorption (2 ms) W_{max}			4.8/ 7.6 J		

PSpice simulation models for all types on the Internet at <http://www.epcos.com/tools>

1) Automotive series for 42 V

Overview of types

Disk varistors, monolithic, leaded

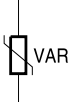


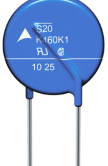

 VAR0017-R					
Nominal diameter	10 mm		14 mm		
	Advanced	Advanced-MP	Standard	Advanced	Advanced-MP
	S10 ... E2 page	S10 ... E2K1 page	S14 page	S14 ... E2 page	S14 ... E2K1 page
Operating voltage V_{RMS}	130 ... 680 V	175 ... 680	11 ... 1100 V	130 ... 680 V	
Surge current (8/20 μ s) i_{max}	3.5 kA		1.0 ... 4.5 kA	5.0/ 6.0 kA	6.0 kA
Energy absorption (2 ms) W_{max}	25 ... 110 J	40 ... 115 J	3.2 ... 230 J	50 ... 220 J	60 ... 260 J
Automotive			S14AUTO page/		
Operating voltage V_{RMS}			14 ... 30 V 48 $V_{DC}^{2)}$		
Surge current (8/20 μ s) i_{max}			1.0 kA		
Energy absorption (10 \times) W_{LD}			50 J		

PSpice simulation models for all types on the Internet at <http://www.epcos.com/tools>

2) Automotive series for 42 V

Overview of types




Disk varistors, monolithic, leaded

 VAR0017-R				
Nominal diameter	20 mm			25 mm
	Standard	Advanced	SuperioR-MP	SuperioR
	S20 page	S20 ... E2 page	S20 ... E3K1 page	S25 ... E4R12 page
Operating voltage V_{RMS}	11 ... 1100 V	130 ... 680 V	130 ... 680 V	130 ... 750 V
Surge current (8/20 μ s) i_{max}	2.0 ... 8.0 kA	10 kA	10 kA/ 12 kA	20 kA
Energy absorption (2 ms) W_{max}	10 ... 410 J	100 ... 440 J	135 ... 595 J	185 ... 1025 J
Automotive	S20AUTO page/			
Operating voltage V_{RMS}	14 ... 30 V 48 V _{DC} ³⁾			
Surge current (8/20 μ s) i_{max}	2.0 kA			
Energy absorption (10 \times) W_{LD}	100 J			

PSpice simulation models for all types on the Internet at <http://www.epcos.com/tools>

3) Automotive series for 42 V

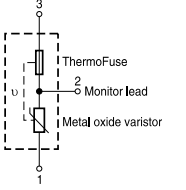




Overview of types
Disk varistors, monolithic, leaded

 VAR VAR0017-R		
Nominal diameter	14 mm	20 mm
	EnergetiQ	
	Q14 page	Q20 page
Operating voltage V_{RMS}	130 ... 460 V	
Surge current (8/20 μ s) i_{max}	8.0 kA	15 kA
Energy absorption (2 ms) W_{max}	75 ... 270 J	100 ... 380 J

PSpice simulation models for all types on the Internet at
<http://www.epcos.com/tools>






Overview of types

Disk varistors in housing

 <p>For ThermoFuse varistors</p>				
Nominal diameter	14 mm	20 mm	25 mm	14 mm
	ThermoFuse varistor, AdvanceD			Fail-safe varistor
	ETFV14 ... E2 page	ETFV20 ... E2 page	ETFV25 ... E4 page	SFS14 page
Operating voltage V_{RMS}	130 ... 420 V		115 ... 420 V	175 ... 385 V
Surge current (8/20 μ s) i_{max}	6.0 kA	10 kA	20 kA	5.0 kA/ 6.0 kA
Energy absorption (2 ms) W_{max}	50 ... 136 J	100 ... 273 J	170 ... 700 J	70 ... 136 J

PSpice simulation models for all types on the Internet at <http://www.epcos.com/tools>





Overview of types
Block varistors, monolithic, screw terminals






 VAR VAR0017-R				
Nominal diameter	32 mm	40 mm	60 mm	80 mm
	HighE			
	B32	B40	B60	B80
	page			
Operating voltage V_{RMS}	130 ... 750 V	75 ... 750 V	130 ... 1100 V	
Surge current (8/20 μ s) i_{max}	25 kA	25/ 40 kA	70 kA	100 kA
Energy absorption (2 ms) W_{max}	210 ... 800 J	190 ... 1200 J	490 ... 3000 J	660 ... 6000 J

 PSpice simulation models for all types on the Internet at <http://www.epcos.com/tools>

Overview of types

Strap varistors, monolithic, straight or bent strap terminals

 VAR VAR0017-R				
Nominal diameter	40 mm			
	HighE			
	LS40 ... QP	LS40 ... QPK2	LS41 ... QP	LS41 ... QPK2
Operating voltage V_{RMS}	130 ... 750 V		130 ... 460 V	
Surge current (8/20 μ s) i_{max}	40 kA		50 kA	
Energy absorption (2 ms) W_{max}	310 ... 1200 J		310 ... 960 J	

 VAR VAR0017-R				
Nominal diameter	40 mm	40 mm	50 mm	50 mm
	HighE			
	LS42 ... QP	LS42 ... QPK2	LS50 ... P	LS50 ... PK2
Operating voltage V_{RMS}	250 ... 460 V		130 ... 550 V	
Surge current (8/20 μ s) i_{max}	65 kA		75 kA	
Energy absorption (2 ms) W_{max}	490 ... 960 J		490 ... 1820 J	

PSpice simulation models for all types on the Internet at <http://www.epcos.com/tools>