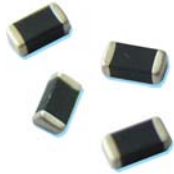
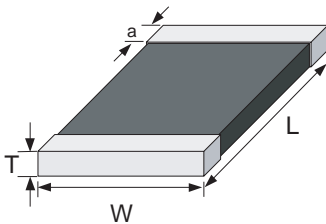


High Speed Series SMD

This product is not recommended for new designs. Please refer to Littelfuse series MHS.



Dimensions



Multilayer Ceramic Transient Voltage Suppressors for High Speed Applications

Features

Ultra low capacitance
Bi-directional clamping
Available with Nickel/Tin end termination or lead free

Applications

Portable / Handheld Products
Universal Serial Bus
Data, Diagnostic I/O Parts
Video/Audio Ports
Mobile Communications
Computer/DSP Products
Industrial Instruments and High Speed Data Line

WebLinks

Further info see:
www.wickmanngroup.com

Further technical info see technical varistor file:
www.wickmanngroup.com/download/techvaristor.pdf

Specifications

Packaging

Tape and Reel		
T 7 inch reel	0402	(10.000 pcs)
	0603	(4.000 pcs.)

Material

Body: Ceramic (ZnO)
Terminals: Ni/Sn plated (Code "P")
Ag/PT/Pd non plated code "N" on request

Operating Temperature

-55 to +125°C

Solderability

acc. to IEC 60068-2-58
235°C, 2s

Soldering Heat Resistance

260°C, 10 sec. (IEC 60068-2-58)
280°C, 5 sec. (IEC 60068-2-58)

Standards

IEC 61000-4-2
MIL-STD-883C

Maximum Ratings (125°C)					Specifications (25°C)					
Type	Packaging	max. cont. working voltage	max. clamping voltage at 1A (8/20µs)	max. non-repetitive surge energy (10/1000µs)	max. ESD clamp voltage 8kV contact (note 1)	max. leakage current @ specified DC voltage				typ. capacitance at 1MHz (note 2)
		$V_{M(DC)}$ (V)	V_C (V)	W_{TM} (J)	V_C (V)	3.5 V µA	5.5 V µA	9.0 V µA	15.0 V µA	$C_{typ.}$ (pF)
WH0402ML090T		9,0	30	0,02	65	0.50	1.00	-	-	22
WH0402ML180W		18,0	55	0,025	125	0.10	0.15	1.00	5.00	12
WH0402ML420R		42,0	110	0,01	300	0.10	0.15	0.25	0.50	3
WH0603ML090T		9,0	30	0,02	65	0.50	1.00	-	-	22
WH0603ML180W		18,0	55	0,025	125	0.10	0.15	1.00	5.00	12
WH0603ML420R		42,0	110	0,01	300	0.10	0.15	0.25	0.50	3

Note 1: Maximum ESD clamp voltage tested with IEC 61000-4-2 Human Body Model discharge test circuit and direct discharge to device terminals.

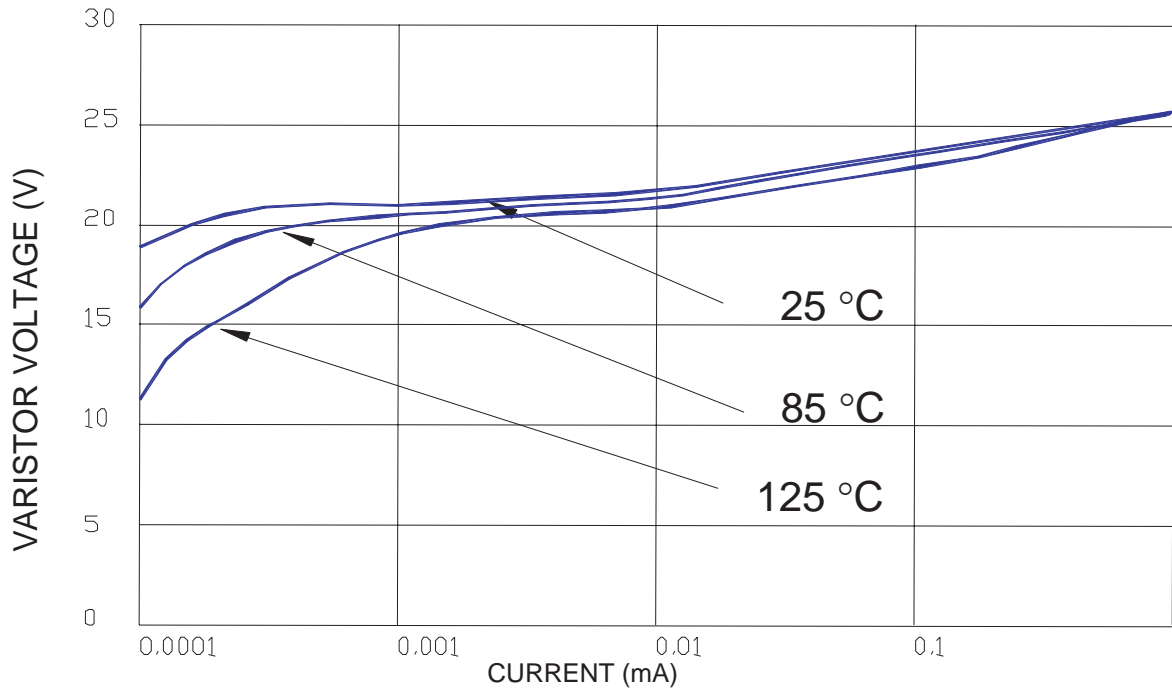
Note 2: Capacitance may be customized, please contact WICKMANN for availability

Order Information

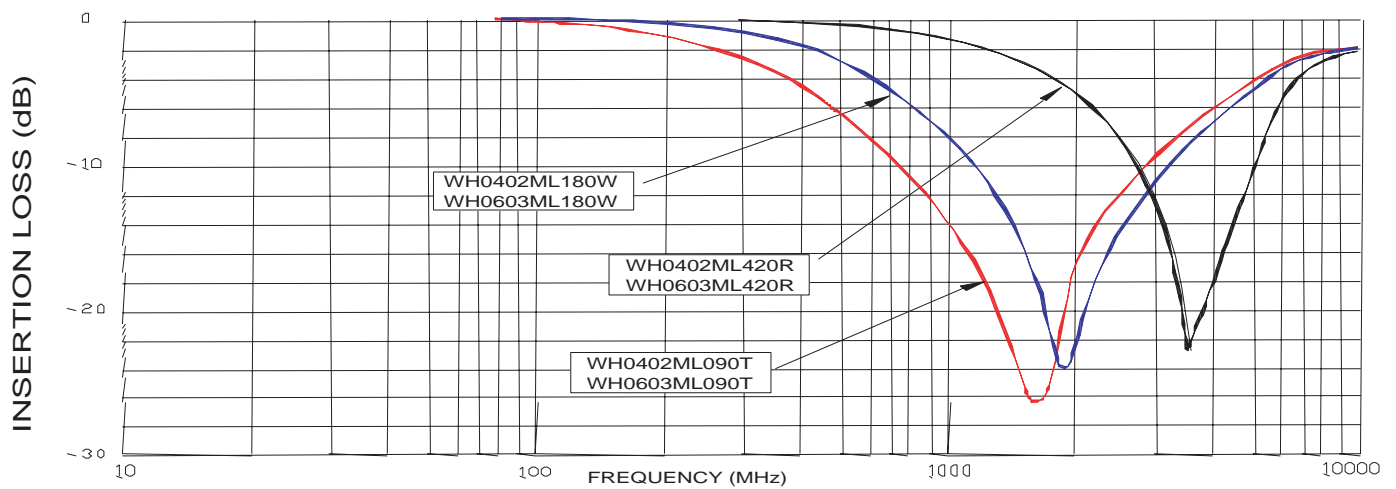
Qty.	Order-Number	Type	Terminal Code	Packaging
		WH0402ML180	W	P
			P	T

Specifications are subject to change without notice

High Speed Series SMD

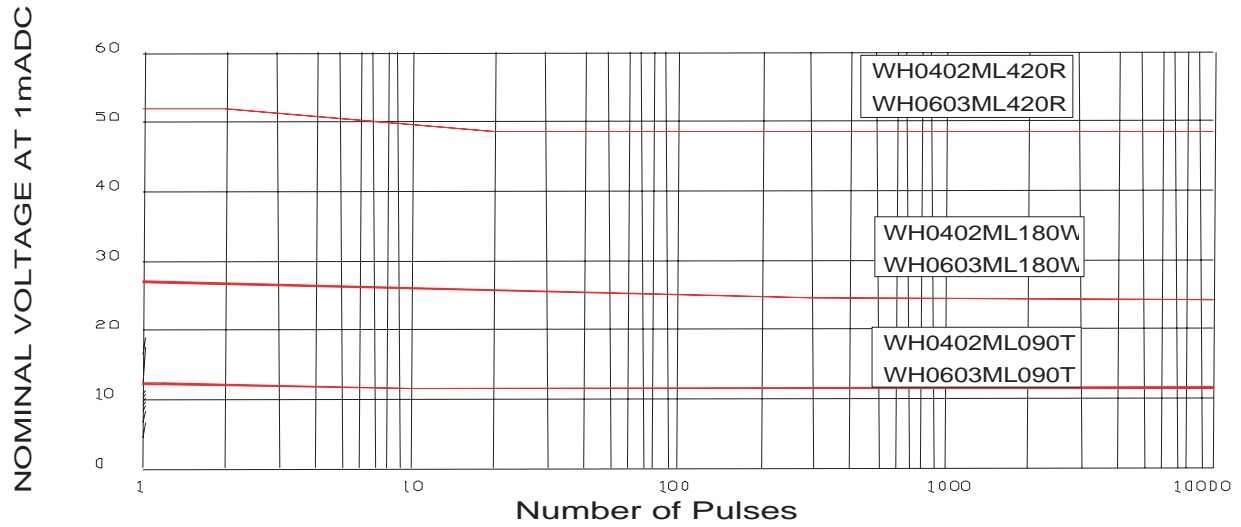


STANDBY CURRENT AT NORMALIZED VARISTOR VOLTAGE AND TEMPERATURE



INSERTION LOSS (S21) CHARACTERISTICS

High Speed Series SMD



NOMINAL VOLTAGE STABILITY TO MULTIPLE ESD IMPULSES
(8KV CONTACT DISCHARGES PER IEC 61000-4-2)

Typical Performance Curves

For applications exceeding 125 °C am surge current and energy rating must

