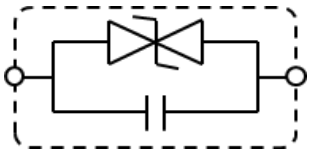
Multilayer Chip Varistor : AVRH10C390KT500NA8

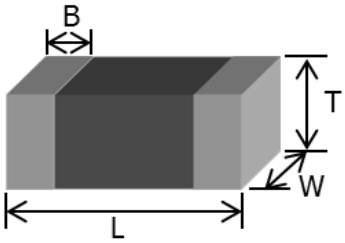
Features

- Automotive (AEC-Q200) grade
- Size : EIA0402 (1.0x0.5mm)
- Excellent ESD clamp characteristics
- High ESD durability : IEC61000-4-2, Contact 25kV
- Operating temperature range : -55℃ ~ 150℃

Equivalent Circuit



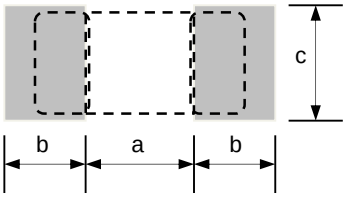
Shapes & Dimensions



Unit / mm

EIA	L	W	T	B
0402	1.0±0.05	0.5±0.05	0.5±0.05	0.1 Min.

Recommended PCB Pattern



Unit / mm

EIA	a	b	c
0402	0.3 to 0.5	0.35 to 0.45	0.4 to 0.6

Product Identification

AVRH	10	C	390	K	T	500	N	A	8
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

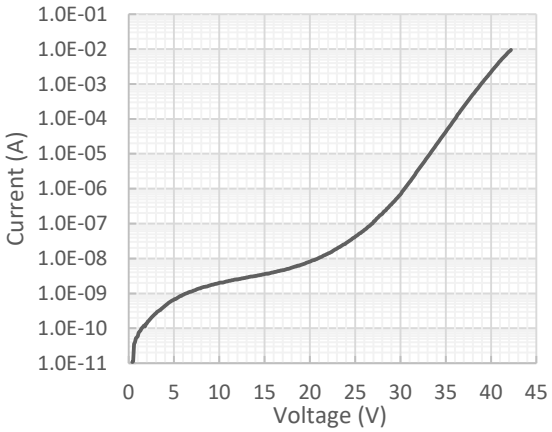
(1)	Series name / AVRH
(2)	Dimension / 10:1.0x0.5(mm)
(3)	Structure
(4)	Varistor voltage / 390:39x10^0(V)
(5)	Varistor voltage tolerance / K : ±10(%)
(6)	Packaging scheme / T : Taping
(7)	Capacitance / 500:50x10^0(pF)
(8)	Capacitance tolerance / N : ±30(%)
(9)	ESD Tolerance (IEC61000-4-2) / A : ±25(kV)
(10)	Operating temparature (Max.) / 8 : 150(℃)

Electrical Characteristics

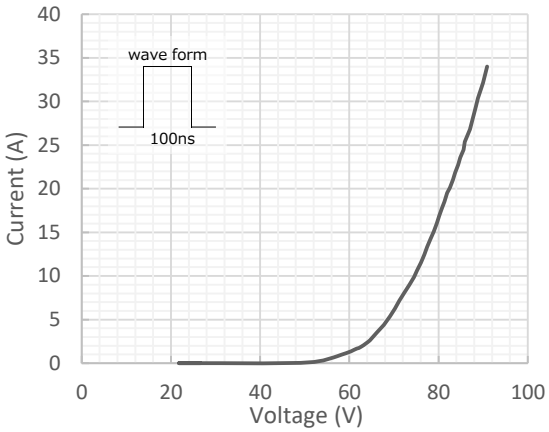
TDK Product Name	Varistor voltage (Breakdown voltage)	Rated voltage	Clamping voltage		Energy	Power Peak Pulse	Peak current	Capacitance
		DC	8/20μs		10/1000μs	10/1000μs	8/20μs	1kHz、1Vrms
		Max.	Typ.		Max.	Typ.	Max.	
	V1mA	Vdc	Vcl	Icl	E	Ppp	Ip	C
	(V)	(V)	(V)	(A)	(Joule)	(W)	(A)	(pF)
AVRH10C390KT500NA8	39(35~43)	28	72	2	0.06	32.9	15	50(35~65)

Multilayer Chip Varistor : AVRH10C390KT500NA8

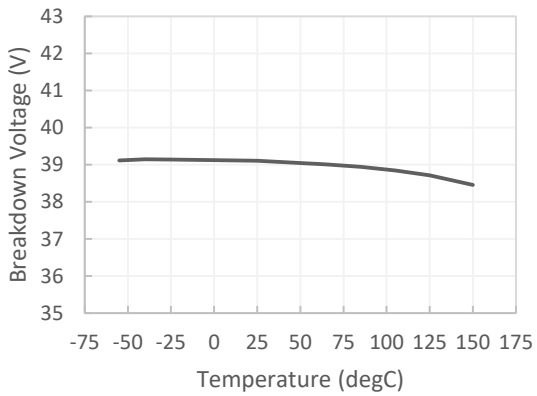
Current - Voltage



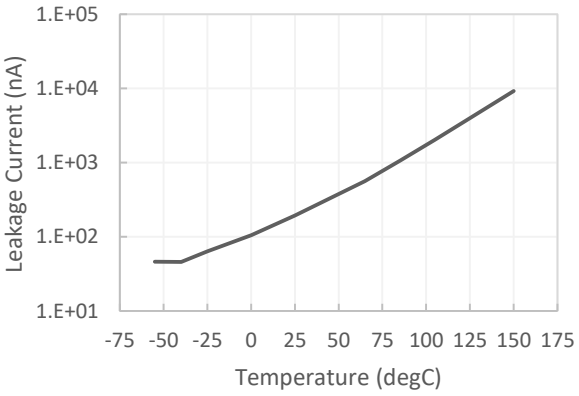
Current - Voltage (TLP)



Breakdown Voltage - Temp.



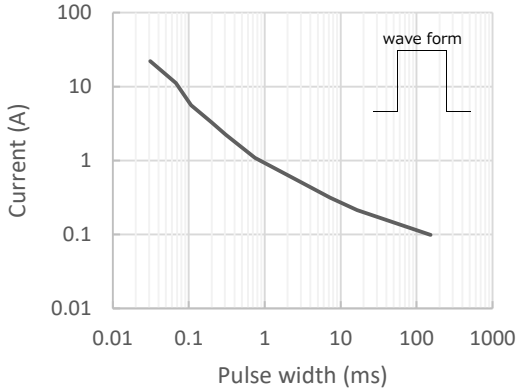
Leakage current - Temp.



※ Voltage : 28 V

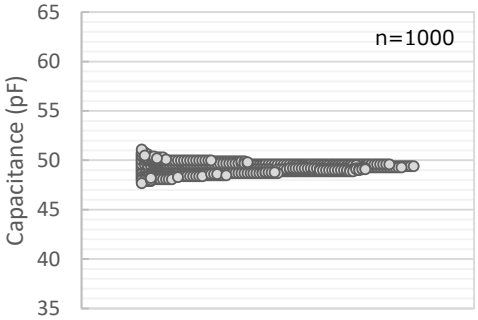
Durability of Pulse Current

(Typ. values)

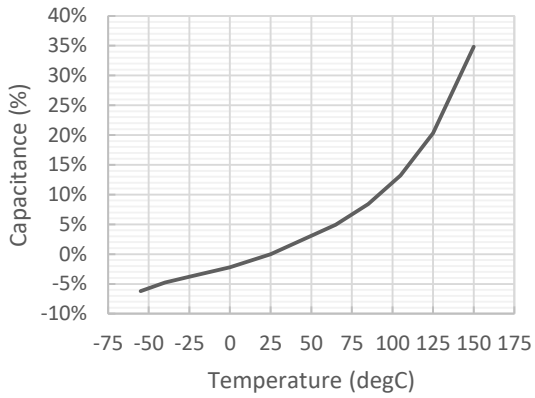


Multilayer Chip Varistor : AVRH10C390KT500NA8

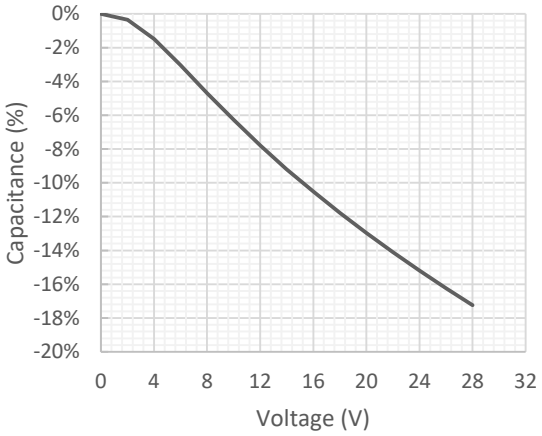
Capacitance Dispersion ※1kHz, 1Vrms



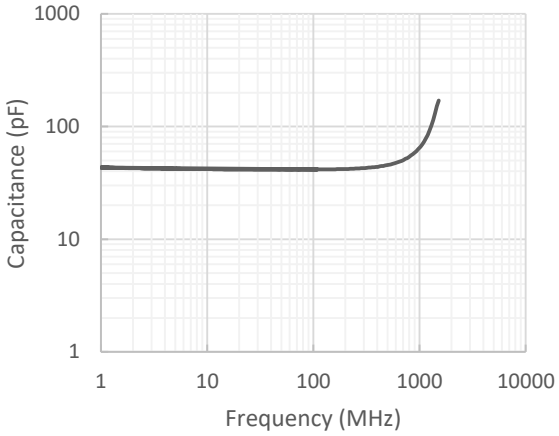
Capacitance - Temp. ※1kHz, 1Vrms



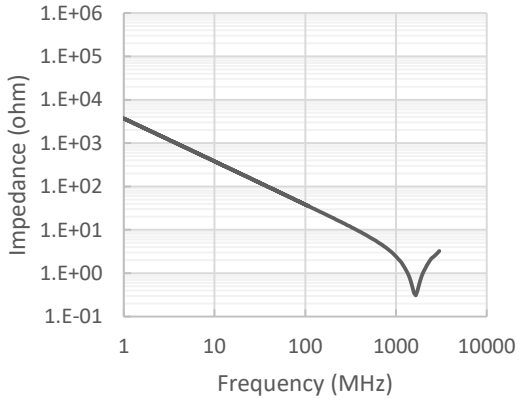
DC bias ※1MHz, 1Vrms



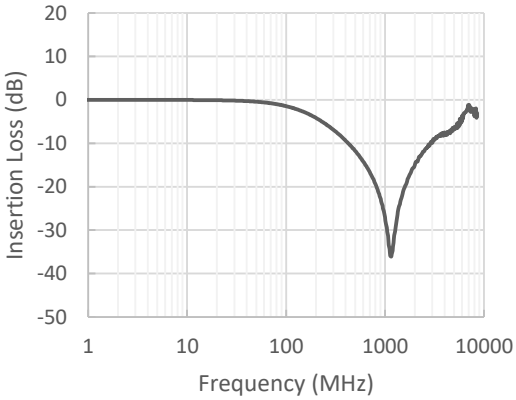
Capacitance - Freq.



Impedance - Freq.



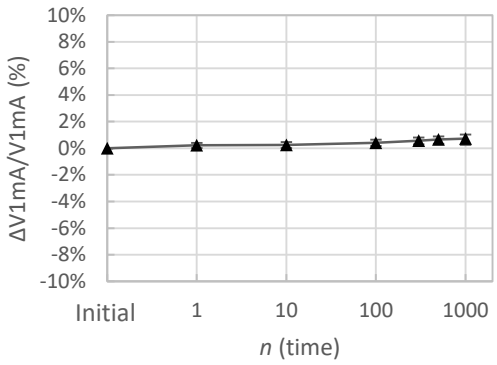
Insertion Loss



Multilayer Chip Varistor : AVRH10C390KT500NA8

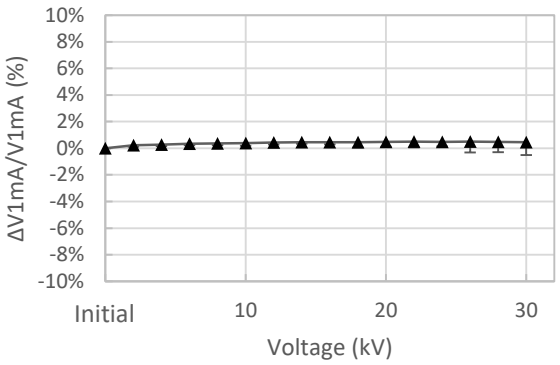
ESD Discharge

▶ 150pF/330ohm, ±25kV, 1000times



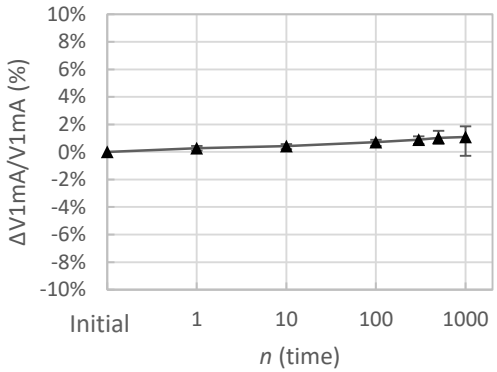
ESD Discharge

▶ 150pF/330ohm, ~±30kV, 10times



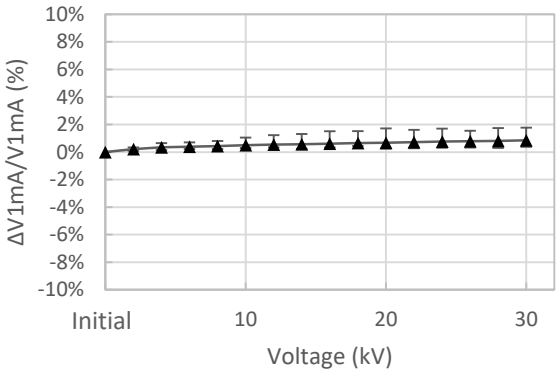
ESD Discharge

▶ 330pF/2000ohm, ±25kV, 1000times



ESD Discharge

▶ 330pF/2000ohm, ~±30kV, 10times



※Criteria : ΔV1mA/V1mA ≦ 10 %