

- Pin P3&P4 or P5&P6 is optional.
- Refer to Page 193 for Auxiliary Function Application.

Dimensions (mm)

Nominal Varistor Voltage	L (±1.0)	L ₁ (±0.5)	L ₂ (±1.0)	W (±1.0)	W ₁ (±0.2)	T (±1.0)	T ₁ (±0.2)
820-201	29.7	14.5	5.0	41.0	6.0	12.4	0.5
221-471	29.7	14.5	5.0	41.0	6.0	14.0	0.5
511-621	29.7	14.5	5.0	41.0	6.0	16.5	0.5
681-821	29.7	14.5	5.0	41.0	6.0	18.5	0.5
911-122	29.7	14.5	5.0	41.0	6.0	22.4	0.5
Nominal Varistor Voltage	d (±0.05)	F ₁ (±0.3)	F ₂ (±0.3)	F ₃ (±0.5)	F ₄ (±0.5)	F ₅ (±0.5)	F ₆ (±0.5)
820-201	Φ0.50	12.5	12.5	2.3	10.2	5.0	5.5
221-471	Φ0.50	12.5	12.5	2.3	11.0	5.0	5.5
511-621	Φ0.50	12.5	12.5	2.3	12.2	5.0	5.5
681-821	Φ0.50	12.5	12.5	2.3	13.5	5.0	5.5
911-122	Φ0.50	12.5	12.5	2.3	20.0	5.0	5.5

Model	L (±1.0)	L ₁ (±0.5)	L ₂ (±1.0)	W (±1.0)	W ₁ (±0.2)	T (±1.0)	T ₁ (±0.2)
TFMOV20K150x	29.7	14.5	5.0	41.0	6.0	14.0	0.5
TFMOV20K300x	29.7	14.5	5.0	41.0	6.0	14.0	0.5
TFMOV20K350x	29.7	14.5	5.0	41.0	6.0	16.5	0.5
TFMOV20K460x	29.7	14.5	5.0	41.0	6.0	18.5	0.5
TFMOV20K550x	29.7	14.5	5.0	41.0	6.0	18.5	0.5
Model	d (±0.05)	F ₁ (±0.3)	F ₂ (±0.3)	F ₃ (±0.5)	F ₄ (±0.5)	F ₅ (±0.5)	F ₆ (±0.5)
TFMOV20K150x	Φ0.50	12.5	12.5	2.3	11.0	5.0	5.5
TFMOV20K300x	Φ0.50	12.5	12.5	2.3	11.0	5.0	5.5
TFMOV20K350x	Φ0.50	12.5	12.5	2.3	12.2	5.0	5.5
TFMOV20K460x	Φ0.50	12.5	12.5	2.3	13.5	5.0	5.5
TFMOV20K550x	Φ0.50	12.5	12.5	2.3	13.5	5.0	5.5

Key Features

- Optional Remote Signal Function
- Space Saving
- RoHS & REACH Compliant

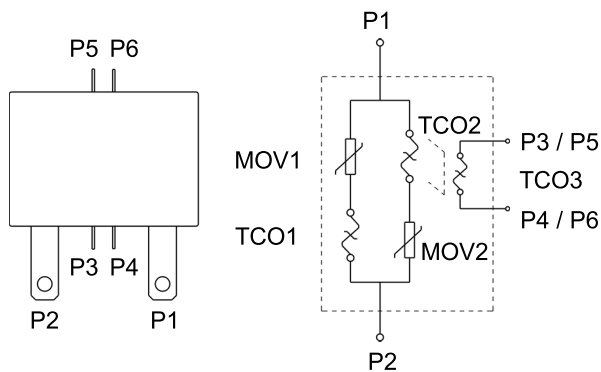
Agency Approvals

- UL / CUL: E322662
- TUV: On-going

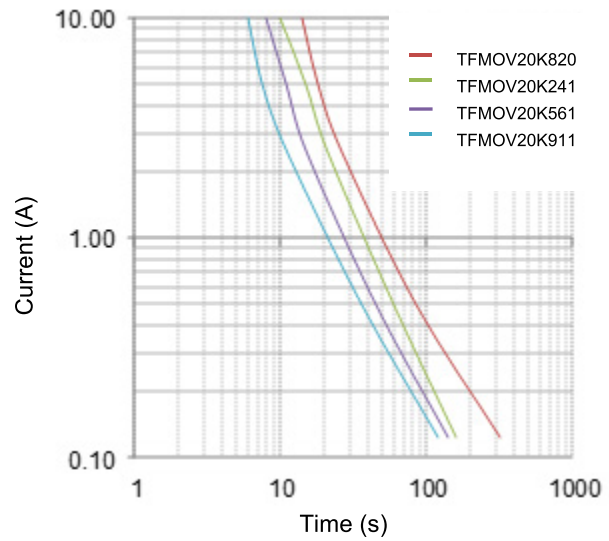
Applications

- Industrial Power Supply
- Surge Protective Device
- Electricity Meter

Schematics

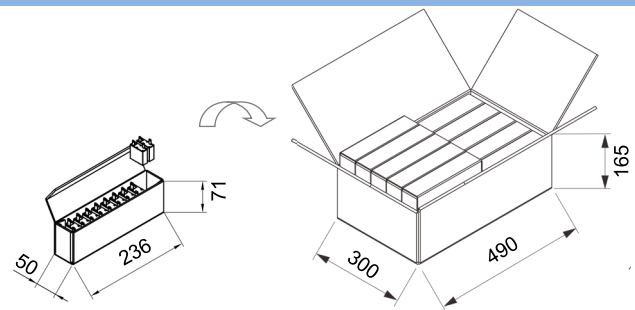


Limited Current Test Curve (UL 1449 4th clause 44.4)



- The above curve is for reference only.

Packaging Information



Nominal Varistor Voltage	Box	Carton
820 - 471	15 PCS / Box	450 PCS / Carton
511 - 821	12 PCS / Box	360 PCS / Carton
911 - 122	10 PCS / Box	300 PCS / Carton

- Unit: mm;
- Please refer to the specifications for the packaging details.

Specifications

Model	Nominal System Voltage	Max. Continuous Operating Voltage	Nominal Discharge Current (8/20 μ s)	Max. Discharge Current (8/20 μ s)	Voltage Protection Rating	SCCR	SPD Type
	U_n	U_c	I_n	I_{max}	VPR (@6 kV/3 kA)		UL 1449
	(Vac)	(Vac)	(kA)		(V)	(kA)	Type 1CA
TFMOV20K150x	120	150	20	50	600	150	Type 1CA
TFMOV20K300x	220	300	20	50	900	200	Type 1CA
TFMOV20K350x	277	350	20	50	1200	200	Type 1CA
TFMOV20K460x	347	460	20	50	1500	200	Type 1CA
TFMOV20K550x	480	550	20	50	1500	200	Type 1CA

Specifications

Model	Max. Continuous Operating Voltage		Varistor Voltage @1 mA dc		Clamping Voltage (Max.)		Nominal Discharge Current (8/20 μs)	Max. Discharge Current (8/20 μs)	Voltage Clamping Ratio ^a		Max. Energy (Joule)	Typical Capacitance (Reference)	SPD Type
	U_c		Min.	Max.	V_C	I_P	I_n	I_{max}	R_{cl}	I_n	10/1000 μs	@1 kHz	UL 1449
	(Vac)	(Vdc)	(V)		(V)	(A)	(kA)			(kA)	(J)	(pF)	
TFMOV20K820x	50	65	74	90	135	150	15	30	3.2	15	196	17600	Type 4CA
TFMOV20K101x	60	85	90	110	165	150	15	30	3.2	15	244	14400	Type 4CA
TFMOV20K121x	75	100	108	132	200	150	15	30	3.2	15	292	12000	Type 4CA
TFMOV20K151x	95	125	135	165	250	150	15	30	3.2	15	370	8800	Type 4CA
TFMOV20K181x	115	150	162	198	300	150	15	30	2.3	15	436	7300	Type 4CA
TFMOV20K201x	130	170	185	225	340	150	20	50	2.3	20	504	6600	Type 4CA
TFMOV20K221x	140	180	198	242	360	150	20	50	2.3	20	560	6000	Type 4CA
TFMOV20K241x	150	200	216	264	395	150	20	50	2.3	20	604	5600	Type 4CA
TFMOV20K271x	175	225	243	297	455	150	20	50	2.3	20	680	4900	Type 4CA
TFMOV20K301x	190	250	270	330	500	150	20	50	2.3	20	750	4400	Type 4CA
TFMOV20K331x	210	275	297	363	550	150	20	50	2.3	20	820	4100	Type 4CA
TFMOV20K361x	230	300	324	396	595	150	20	50	2.3	20	930	3700	Type 4CA
TFMOV20K391x	250	320	351	429	650	150	20	50	2.3	20	1040	3400	Type 4CA
TFMOV20K431x	275	350	387	473	710	150	20	50	2.3	20	1150	3200	Type 4CA
TFMOV20K471x	300	385	423	517	775	150	20	50	2.3	20	1260	2900	Type 4CA
TFMOV20K511x	320	415	459	561	845	150	20	50	2.3	20	1330	2600	Type 4CA
TFMOV20K561x	350	460	504	616	925	150	20	50	2.3	20	1440	2400	Type 4CA
TFMOV20K621x	385	505	558	682	1025	150	20	50	2.3	20	1580	2200	Type 4CA
TFMOV20K681x	420	560	612	748	1120	150	20	50	2.3	20	1580	2000	Type 4CA
TFMOV20K751x	460	615	675	825	1240	150	20	50	2.3	20	1650	1800	Type 4CA
TFMOV20K821x	510	670	738	902	1355	150	20	50	2.3	20	1680	1600	Type 4CA
TFMOV20K911x	550	745	819	1001	1500	150	20	50	2.3	20	1800	1400	Type 4CA
TFMOV20K102x	625	825	900	1100	1650	150	20	50	2.3	20	1900	1320	Type 4CA
TFMOV20K112x	680	895	990	1210	1815	150	20	50	2.3	20	2080	1230	Type 4CA
TFMOV20K122x	750	1000	1080	1320	1980	150	20	50	2.3	20	2340	1100	Type 4CA

x: Optional direction of the Remote Signal , Default with one downward Remote Signal P3&P4, -IT with one upward Remote Signal P5 & P6.

a: $R_{cl} = \frac{V_C}{V_N}$, $U_p \geq V_C$; V_C : Clamping Voltage (@ I_n), V_N : Varistor Voltage, U_p : Voltage Protection Level.

The Value of Voltage Protection Level (U_p) is determined according to IEC 61643-11:2011 clause 6.4 .

Preferred values of voltage protection level (kV): 0.08; 0.09; 0.10; 0.12; 0.15; 0.22; 0.33; 0.4; 0.5; 0.6; 0.7; 0.8; 0.9; 1.0; 1.2; 1.5; 1.8; 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 8.0; 10.