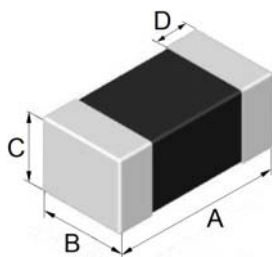


SMD Transient Voltage Suppressors**TVSM0402ESXF-Series****1. Dimension**

Series	A(mm)	B(mm)	C(mm)	D(mm)
0402	1.00±0.10	0.50±0.10	0.60 max.	0.25±0.10

2. Part Numbering

TVSM 0402 ESX F 050 - 100 P Y

A B C D E F G H

A: Series

B: Dimension

C: Category Code

D: Product Grade

E: Voltage Code

F: Characteristic Code

G: Characteristic Unit Code

H: Inner Code

Multilayer Varistor

Standard ESD Protection

General Grade

050=Working Voltage 5V

100=Capacitance Value 10pF

P=pF

Capacitance Tolerance

3. Specification

TAI-TECH Part Number	Maximum allowable continuous AC voltage @ 50-60Hz (V)	Maximum allowable continuous DC voltage (V)	Varistor breakdown voltage (V)	Typical capacitance value @ 1MHz (pF)	Typical capacitance value tolerance (%)	Maximum allowable clamping voltage (V)	Leakage current at V_{DC} (at initial state) (μA)	Leakage current at V_{DC} (after ESD test) (μA)
TVSM0402ESXF050-100PY	3.3	5	28~38	10	±30	72	< 0.1	< 2
TVSM0402ESXF200-100PY	13	20	35~45	10	±30	85	< 0.1	< 2
TVSM0402ESXF240-0R8PP	18	24	100~150	0.8	+80/-20	200	< 0.1	< 2
TVSM0402ESXF240-2R5PP	18	24	100~150	2.5	+80/-20	200	< 0.1	< 2

Notes :

1. The varistor breakdown voltage was measured at 1mA.
2. The clamping voltage was measured at 8/20 μs standard current.
3. The leakage current was measured at working voltage.

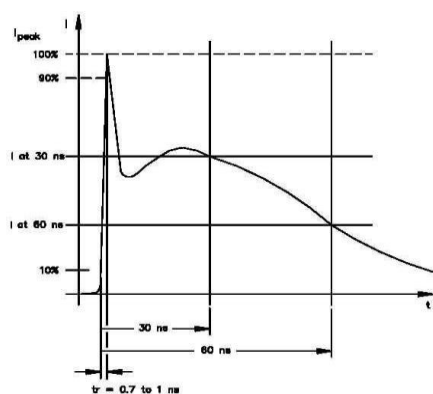
3-1. Reference Data

ITEM	Symbol	Unit	Value
Response time	Trise	ns	TVSM0402ESXF050-100PY : < 1 TVSM0402ESXF200-100PY : < 1 TVSM0402ESXF240-0R8PP : < 1 TVSM0402ESXF240-2R5PP : < 0.5
Operation ambient temperature	T _{OPT}	°C	-50~+85
Storage temperature range	T _{STG}	°C	-50~+125
ESD testing	IEC61000-4-2		Level 4

3-2. Other Data

Body	ZnO
End termination	Ag/Ni/Sn
Packaging	Reel
Complies with standard	IEC61000-4-2
Complies with RoHs standard	Yes
Lead content	< 1000 ppm
Marking	None

4. ESD Wave Form



IEC61000-4-2 Standards

SEVERITY LEVEL	AIR DIRCHARGE	DIRECT DISCHARGE
1	2 KV	2 KV
2	4 KV	4 KV
3	8 KV	6 KV
4	15 KV	8 KV

IEC61000-4-2 compliant ESD current pulse waveform