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Fast Facts

Product Group: Vishay Semiconductors, Diodes / October 2022

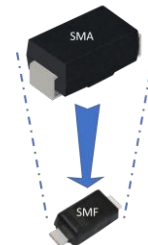


New T4FxxAHM3 Series TVS Diodes With 400 W Surge Capability in Compact SMF (DO-219AB) Package for Automotive Applications

We've introduced a new series of transient voltage suppressors (TVS) that offer 400 W peak pulse power capability at 10/1000 μ s in the SMF (DO-219AB) package. One of the low profile packages in the eSMP® series, the package size of SMF (DO-219AB) is much smaller than SMA (DO-214AC), but can afford the same 400 W power capability. The unidirectional devices perform over a wide operating temperature range of -65 °C to +185 °C for automotive applications, with all part numbers available in AEC-Q101 qualified versions.

Uni-directional Device

Cathode  Anode



Device Specification Table

No	Device Name	Package	Type	V_{RWM} (V)	Maximum Reverse Leakage @ V_{WM} I_D (μ A)	Breakdown Voltage V_{BR} @ I_T (V)			Maximum V_C @ I_{PPM}	
						Min.	Nom.	Max.	10/1000 μ s	
									V_C (V)	I_{PPM} (A)
1	T4F10AHM3/H or /I	SMF (DO-219AB)	AEC-Q101	8.55	5.0	9.5	10.0	10.5	14.5	27.6
2	T4F11AHM3/H or /I			9.40	1.0	10.5	11.0	11.6	15.6	25.6
3	T4F12AHM3/H or /I			10.2	1.0	11.4	12.0	12.6	16.7	24.0
4	T4F13AHM3/H or /I			11.1	1.0	12.4	13.0	13.7	18.2	22.0
5	T4F15AHM3/H or /I			12.8	1.0	14.3	15.0	15.8	21.2	18.9
6	T4F16AHM3/H or /I			13.6	1.0	15.2	16.0	16.8	22.0	17.8
7	T4F18AHM3/H or /I			15.3	1.0	17.1	18.0	18.9	25.5	15.9
8	T4F20AHM3/H or /I			17.1	1.0	19.0	20.0	21.0	27.7	14.4
9	T4F22AHM3/H or /I			18.8	1.0	20.9	22.0	23.1	30.6	13.1
10	T4F24AHM3/H or /I			20.5	1.0	22.8	24.0	25.2	33.2	12.0
11	T4F27AHM3/H or /I			23.1	1.0	25.7	27.0	28.4	37.5	10.7
12	T4F30AHM3/H or /I			25.6	1.0	28.5	30.0	31.5	41.4	9.7
13	T4F33AHM3/H or /I			28.2	1.0	31.4	33.0	34.7	45.7	8.8
14	T4F36AHM3/H or /I			30.8	1.0	34.2	36.0	37.8	49.9	8.0
15	T4F39AHM3/H or /I			33.3	1.0	37.1	39.0	41.0	53.9	7.4
16	T4F43AHM3/H or /I			36.8	1.0	40.9	43.0	45.2	59.3	6.7
17	T4F47AHM3/H or /I			40.2	1.0	44.7	47.0	49.4	64.8	6.2
18	T4F51AHM3/H or /I			43.6	1.0	48.5	51.0	53.6	70.1	5.7

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Notes

Preferred package code "H" and "I"

"H" - 7" diameter plastic tape and reel

"I" - 13" diameter plastic tape and reel

Features

- Low profile package
- Junction passivation optimized design with passivated anisotropic rectifier technology
- $T_J = 185\text{ }^{\circ}\text{C}$, suitable for high reliability applications
- Unidirectional polarity only, meet automotive requirements
- 400 W peak pulse power capability with a 10/1000 μs waveform
- Excellent clamping capability
- AEC-Q101 qualified
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 $^{\circ}\text{C}$
- Wave and reflow solderable
- Compatible to SOD-123W package case outline

Applications

- Protection of sensitive ICs, MOSFETs, and signal lines of sensor units in automotive applications against voltage transients induced by inductive load switching and lighting

Samples

Available at the Vishay Sample Service Center (VSSC)

Contact Information

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