

# TransFeed Array - V3F4 Series

TVS Protection and EMI Attenuation in a 4 Element Array

## DESCRIPTION

AVX has combined the best electrical characteristics of its TransGuard Transient Voltage Suppressors (TVS) and its Feedthru Capacitors into a single chip for state-of-the-art over voltage circuit protection and EMI reduction over a broad range of frequencies. This unique combination of multilayer ceramic construction in a feedthru configuration gives the circuit designer a single 0805 chip that responds to transient events faster than any TVS device on the market today, and provides significant EMI attenuation when in the off-state. The reduction in parallel inductance, typical of the feedthru chip construction when compared to the construction of standard TVS or ceramic capacitor chips, gives the TransFeed product two very important electrical advantages: (1) faster "turn-on" time. Calculated response times of <200 pSec are not unusual with this device, and measured response times range from 200 – 250 pSec.

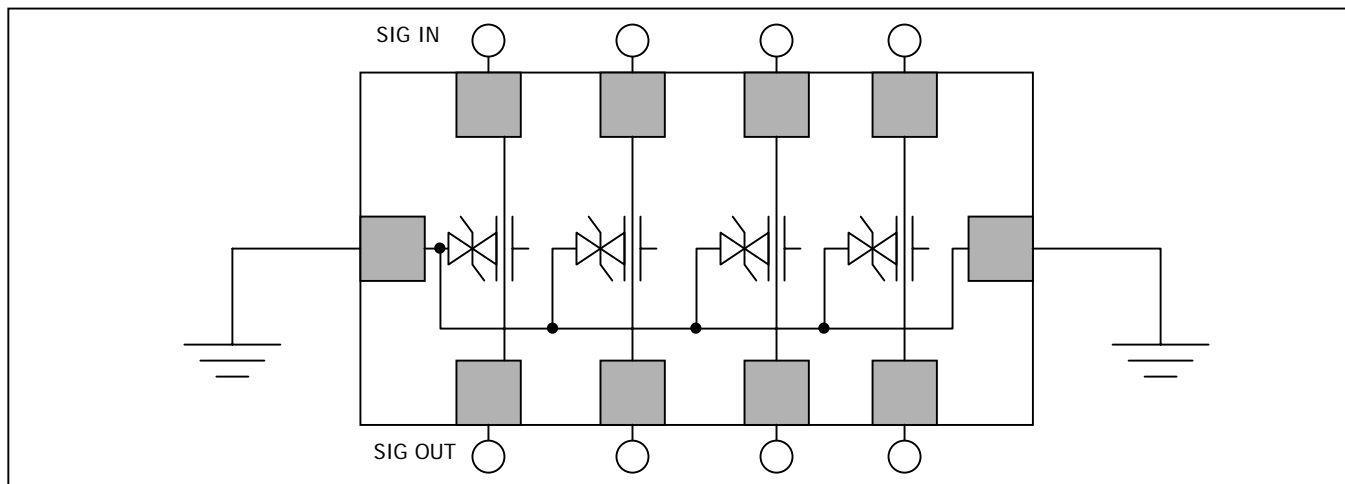
The TransFeed "turn-on" characteristic is less than half that of an equivalent TransGuard part — and TransGuards clamp transient voltages faster than any other bipolar TVS solution such as diodes; (2) the second electrical advantage of lower parallel inductance, coupled with optimal series inductance, is the enhanced attenuation characteristics of the TransFeed product. Not only is there significantly greater attenuation at a higher self-resonance frequency, but the roll-off characteristic becomes much flatter, result-ing in EMI filtering over a much broader frequency spec-trum. Typical applications include filtering/protection on Microcontroller I/O Lines, Interface I/O Lines, Power Line Conditioning and Power Regulation. Where designers are concerned with both transient voltage protection and EMI attenuation, either due to the electrical performance of their circuits or due to required compliance to specific EMC regulations, the TransFeed product is an ideal choice.



## PART NUMBERING

<u>V3F4</u>	<u>18</u>	<u>A</u>	<u>400</u>	<u>Y</u>	<u>3</u>	<u>G</u>	<u>DP</u>
Size & Style	Voltage	Energy Rating	Clamping Voltage	Cap Tolerance	DC Resistance	Feedthru Current	Packaging & Termination
1206 4 Elements	18 = 18V	A = 0.1J	400=40V	Max	3=0.250hm	G = 300mA	D = 7" Reel 4000pcs P = Plated Ni/Sn

## PINOUT CONFIGURATION



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<u>PARAMETER</u>	<u>TEST CONDITION</u>	<u>REQUIREMENT/LIMIT</u>
Working Voltage (DC)	$I < 50\mu A$	18V
Breakdown Voltage	1 mA	20V-28V
Peak Current	8/20 $\mu S$	20A
Transient Energy	10/1000 $\mu S$	0.1J max.
Clamping Voltage	2A 8/20 $\mu S$	40V max.
Capacitance	1 mhz, 0.5 Vrms	150pF typ.
Inductance	di/dt = 0.1 A/nS	< 1nH typ.

## PHYSICAL DIMENSIONS (mm)

Length	$3.20 \pm 0.20$
Width	$1.60 \pm 0.20$
Thickness	1.22 max.
Termination Band Width	$0.41 \pm 0.10$
Pitch	0.76 Ref.

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