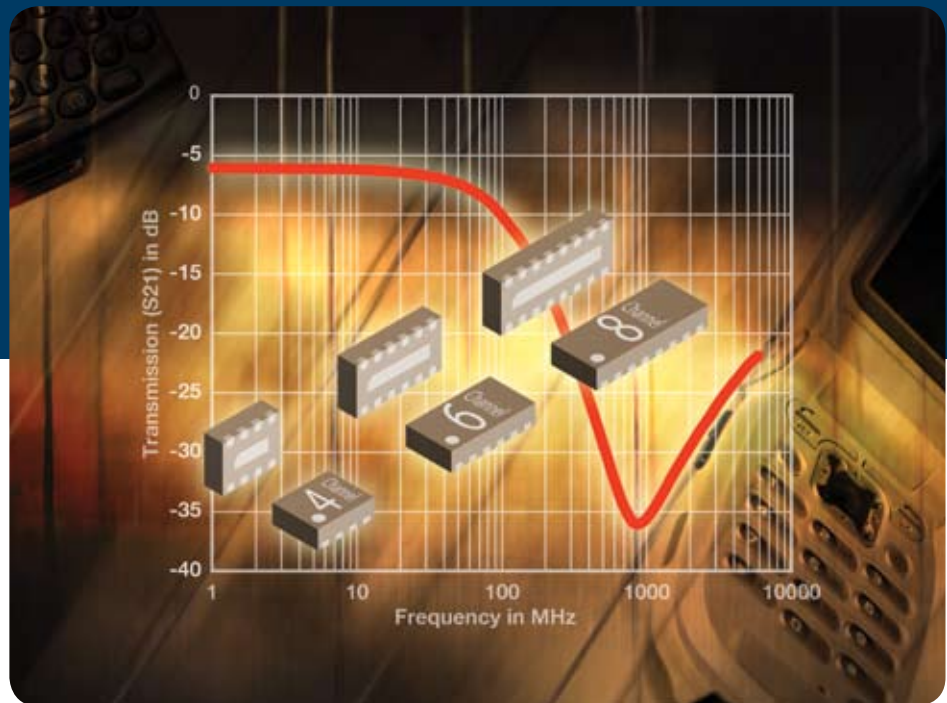




MULTI-CHANNEL EMI FILTERS

in LLP Leadless Packages



These new four-, six-, and eight-channel EMI filter arrays feature ultra-compact LLP leadless packages with low profile of 0.6 mm and a pin-to-pin pitch of 0.4 mm for board space savings.

FEATURES

- Choice of four-, six-, and eight-channel versions
- Ultra-compact footprint with a low profile of 0.6 mm and a pin-to-pin pitch of 0.4 mm for board space savings
- Attenuate unwanted signals by more than 28 dB over a frequency range of 900 MHz up to 2.3 GHz
- Offer resistance of 100 Ω and an input capacitance of 60 pF
- Low leakage current helps to prolong battery life
- Provide transient protection for data lines as per IEC 61000-4-2 (ESD) at 30 kV (air and contact discharge) and IEC 61000-4-5 (lightning) from 4 A ($t_p = 8/20\mu s$)
- Compliant with RoHS 2002/95/EC and WEEE 2002/96/EC

Datasheet(s) available on our web site at www.vishay.com
<http://www.vishay.com/doc?81385> (VEMI45AA-HNH)
<http://www.vishay.com/doc?81384> (VEMI65AA-HCI)
<http://www.vishay.com/doc?81386> (VEMI85AA-HGK)



SPECIFICATIONS

Part Number	Channels	Typical line resistance (Ω)	Typical cut-off frequency (MHz)	Package type
VEMI45AA-HNH	4	100	100	LLP1713
VEMI65AA-HCI	6	100	100	LLP2513
VEMI85AA-HGK	8	100	100	LLP3313

APPLICATIONS

ESD protection in portable electronics for mobile computing, mobile communication, consumer, industrial, automotive, and medical applications

ELECTRICAL CHARACTERISTICS

Ratings at 25 °C, ambient temperature unless otherwise specified

VEMix5AA-SERIES — All inputs to ground

Parameter	Test conditions/remarks	Symbol	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	at $I_R = 1 \mu\text{A}$	V_{RWM}	5			V
Reverse current	at $V_R = V_{RWM}$	I_R			1	μA
Reverse breakdown voltage	at $I_R = 1 \text{ mA}$	V_{BR}	6			V
Maximum surge current	acc. IEC 61000-4-5	I_{PPM}	4	6		A
Positive clamping voltage	at $I_{PP} = 1 \text{ A}$ applied at the input, measured at the output; acc. IEC 61000-4-5	V_{C-out}			7	V
	at $I_{PP} = I_{PPM} = 4 \text{ A}$ applied at the input, measured at the output; acc. IEC 61000-4-5	V_{C-out}			8	V
Negative clamping voltage	at $I_{PP} = -1 \text{ A}$ applied at the input, measured at the output; acc. IEC 61000-4-5	V_{C-out}	-1			V
	at $I_{PP} = I_{PPM} = -4 \text{ A}$ applied at the input, measured at the output; acc. IEC 61000-4-5	V_{C-out}	-1.2			V
Input capacitance	at $V_R = 0 \text{ V}$; $f = 1 \text{ MHz}$	C_{in}		60		pF
	at $V_R = 2.5 \text{ V}$; $f = 1 \text{ MHz}$	C_{in}		36		pF
ESD-clamping voltage	at $\pm 30 \text{ kV}$ ESD-pulse acc. IEC 61000-4-2	V_{CESD}		7.5		V
Protection paths	Number of channels which can be protected	$N_{channel}$			4, 6 or 8	channel
Line resistance	Measured between input and output; $I_S = 10 \text{ mA}$	R_S	90	100	110	Ω

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