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(21) International Application Number: PCT/US95/08808 (22) International Filing Date: 14 July 1995 (14.07.95) (30) Priority Data: 08/275,154 14 July 1994 (14.07.94) US (71) Applicant (for all designated States except US): ORYX TECHNOLOGY CORPORATION [US/US]; 47341 Bayside Parkway, Fremont, CA 94538 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): SHRIER, Karen, P. [US/US]; 42986 Noria Road, Fremont, CA 94539 (US). BEHLING, Gerald, R. [US/US]; 15109 Nob Hill Drive, San Jose, CA 95127 (US). INTRATER, James, B. [US/US]; 592 Mill Creek Lane #316, Santa Clara, CA 95054 (US). JOSHI, Kailash, C. [US/US]; 1593 Pebble Beach Court, Milpitas, CA 95117 (US). ALSTON, William, W., Jr. [US/US]; 1024 Thistle Court, Sunnyvale, CA 94086 (US). (74) Agent: DILLAHUNTY, T., Gene; Burns, Doane, Swecker & Mathis, P.O. Box 1404, Alexandria, VA 22313-1404 (US).	(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(54) Title: SINGLE AND MULTI-LAYER VARIABLE VOLTAGE PROTECTION DEVICES AND METHODS OF MAKING SAME		
(57) Abstract Disclosed is a variable voltage protection device for electronic devices which in one aspect comprises a thin layer of neat dielectric polymer, glass or ceramic (12) positioned between a ground plane (14) and an electrical conductor (10) for overvoltage protection, wherein the neat polymer, glass or ceramic layer does not include the presence of conductive or semiconductive particles. Also disclosed is the combination of the neat dielectric polymer, glass or ceramic thin layer (12) positioned on a conventional variable voltage protection material (13) comprising a binder containing conductive, semiconductive or insulative particles. A multi-layer variable voltage protection component is disclosed comprising three layers of overvoltage protection material (15, 16, 17) wherein the outer two layers contain a lower percentage of conductive, semiconductive and/or insulative particles and wherein the inner layer contains a higher percentage of conductive, semiconductive and/or insulative particles. The multi-layer component can optionally be used in combination with the neat dielectric polymer, glass or ceramic layer (12, 12') and can optionally have interposed metal layers (18, 18'). A method is disclosed for dispersing colloidal insulative particles and conductive, semiconductive and/or insulative particles using a volatile solvent for dispersement of the colloidal insulative particles and the conductive, semiconductive or insulative particles before mixing the resultant particles with the binder.		

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