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## List of lettered conditions

- (*aVD*) anti-doubling for volume, page 10  
(*BC*) bounded covering principle, page 12  
(*DG*) Davies-Gaffney inequality, page 127  
*DLE*(*E*) diagonal lower estimate, page 73  
*DLE*(*F*) diagonal lower estimate with respect to *F*, page 74  
(*DUE*<sub>α,β</sub>) diagonal upper estimate, page 61  
(*DUE*<sub>ν</sub>) diagonal upper estimate with polynomial decay, page 62  
(*E*<sub>β</sub>) polynomial mean exit time, page 3  
(*E*) condition E-bar, page 13  
(*ER*) Einstein relation, page 83  
(*FKρ*) isoperimetric inequality for resistance, page 116  
(*FK*) Faber-Krahn inequality, page 116  
(*FKE*) isoperimetric inequality for *E*, page 116  
(*FK*<sub>ν</sub>) Faber-Krahn inequality, page 62  
(*g*<sub>0,1</sub>) Green kernel upper bound, page 97  
(*GE*<sub>α,β</sub>) two-sided sub-Gaussian estimate, page 4  
*g*(*F*) two-sided bound on Green kernel, page 89  
(*H*) elliptic Harnack inequality, page 35  
*HG*(*U, M*) annulus Harnack inequality for Green functions, page 36  
*HG*(*M*) annulus Harnack inequality for Green functions on balls, page 36  
(*wHG*) weak Harnack inequality for Green functions, page 36  
*LE*(*F*) lower estimate, page 159  
(*MV*) mean-value inequality, page 96  
(*MVG*) mean-value inequality for *G*, page 97  
*NDLE*(*F*) near diagonal lower estimate, page 136  
(*p*<sub>0</sub>) controlled weights condition, page 8  
*PH*(*F*) parabolic Harnack inequality, page 169  
*PI*(*F*) Poincaré inequality, page 178  
*PLE*(*E*) particular lower estimate, page 131  
*PMV*(*F*) parabolic mean-value inequality with δ = 1, page 96  
*PMV*<sub>δ</sub>(*F*) parabolic mean-value inequality with δ < 1, page 96

- $PSMV(F)$  parabolic super mean-value inequality, page 131  
 $wPMV(F)$  weak parabolic mean-value inequality, page 96  
 $wPSMV(F)$  weak parabolic super mean-value inequality, page 132  
 $PUE(E)$  particular upper estimate, page 99  
 $RLE(F)$  resistance lower estimate, page 87  
 $(\rho v)$  uniform scaling function, page 17  
 $(aD\rho v)$  anti-doubling for  $\rho v$ , page 86  
 $VSR$  very strong recurrence, page 147  
 $(TC)$  time comparison principle, page 14  
 $(TD)$  time doubling property, page 14  
 $(wTC)$  weak time comparison principle, page 14  
 $UE(E)$  upper estimate, page 99  
 $(V_\alpha)$  polynomial volume growth, page 10  
 $(VC)$  volume comparison principle, page 10  
 $(VD)$  volume doubling property, page 10  
 $(wVC)$  weak volume comparison principle, page 10  
 $(^*)$  set of conditions equivalent to  $(ER)$ , page 154

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## Subject index

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