

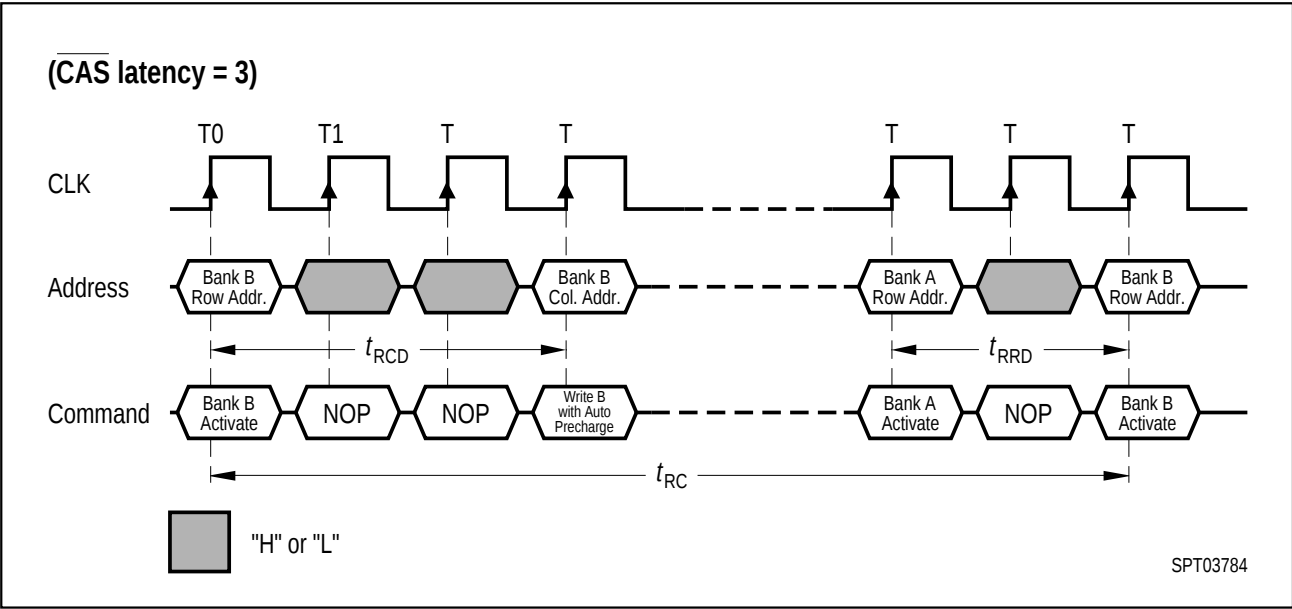
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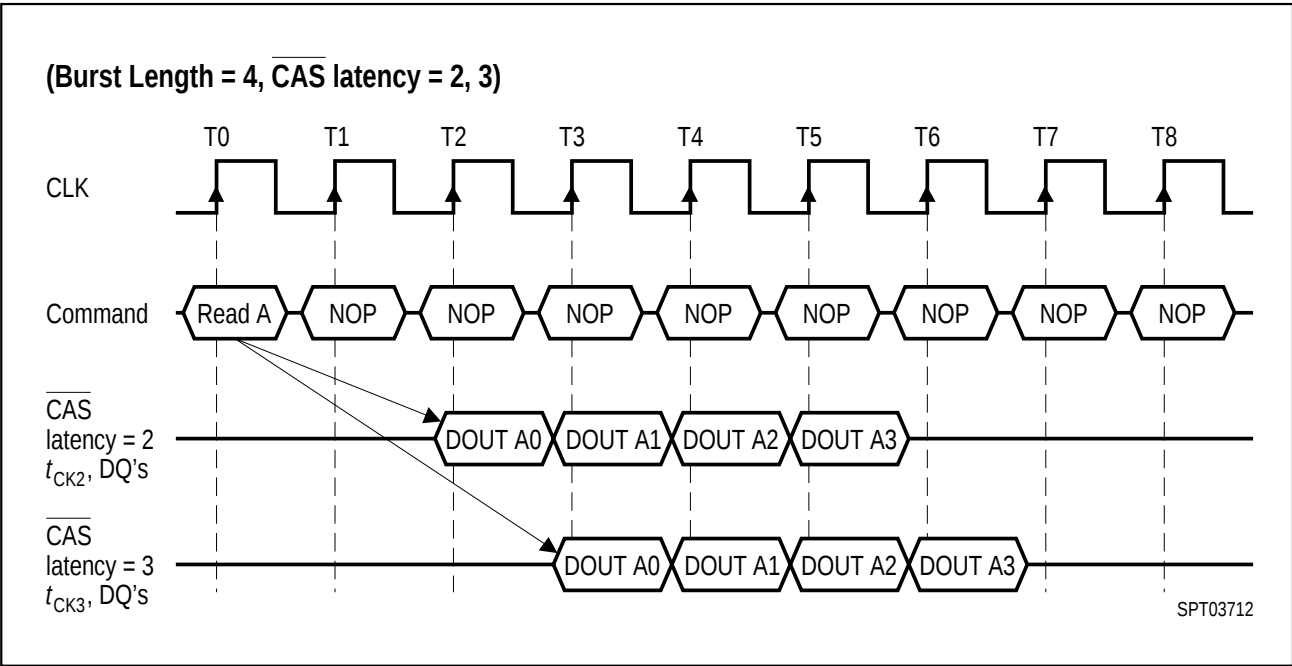
Timing Diagrams (cont'd)

16	Random Column Read (Page within same Bank)
16.1	$\overline{\text{CAS}}$ Latency = 2
16.2	$\overline{\text{CAS}}$ Latency = 3
17	Random Column Write (Page within same Bank)
17.1	$\overline{\text{CAS}}$ Latency = 2
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21.2	$\overline{\text{CAS}}$ Latency = 3
22	Precharge Termination of a Burst
22.1	$\overline{\text{CAS}}$ Latency = 2

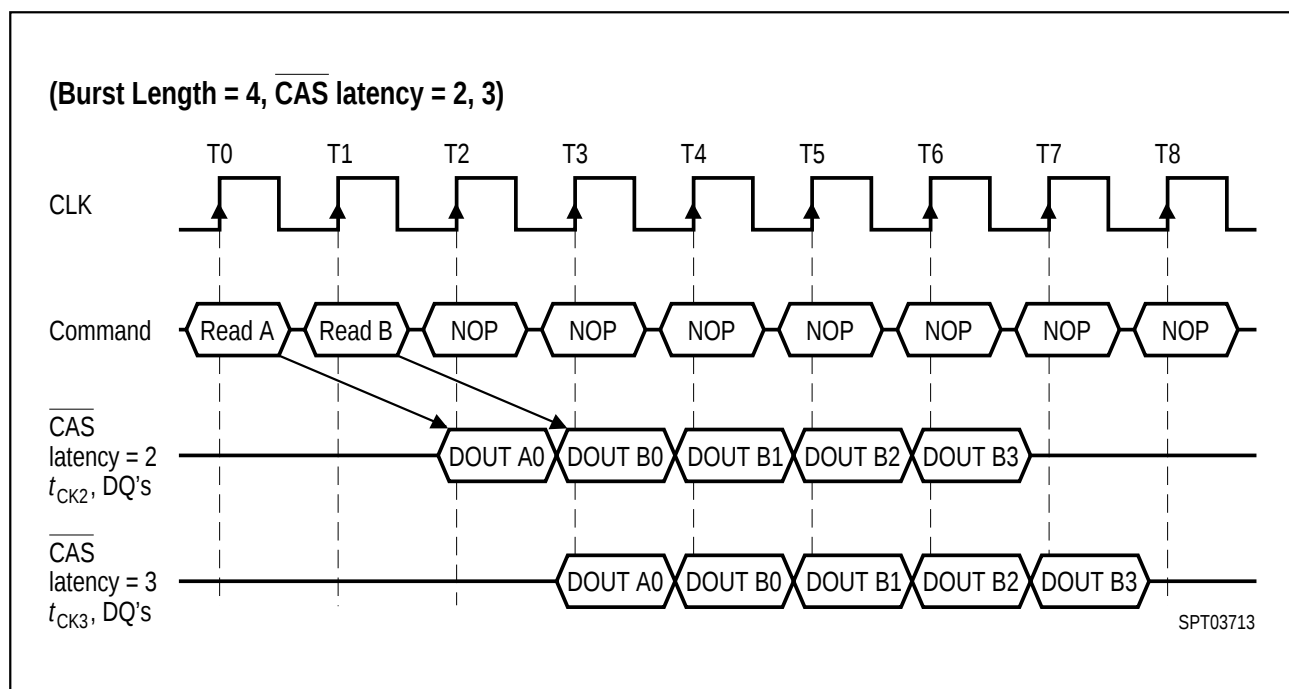
1. Bank Activate Command Cycle



2. Burst Read Operation

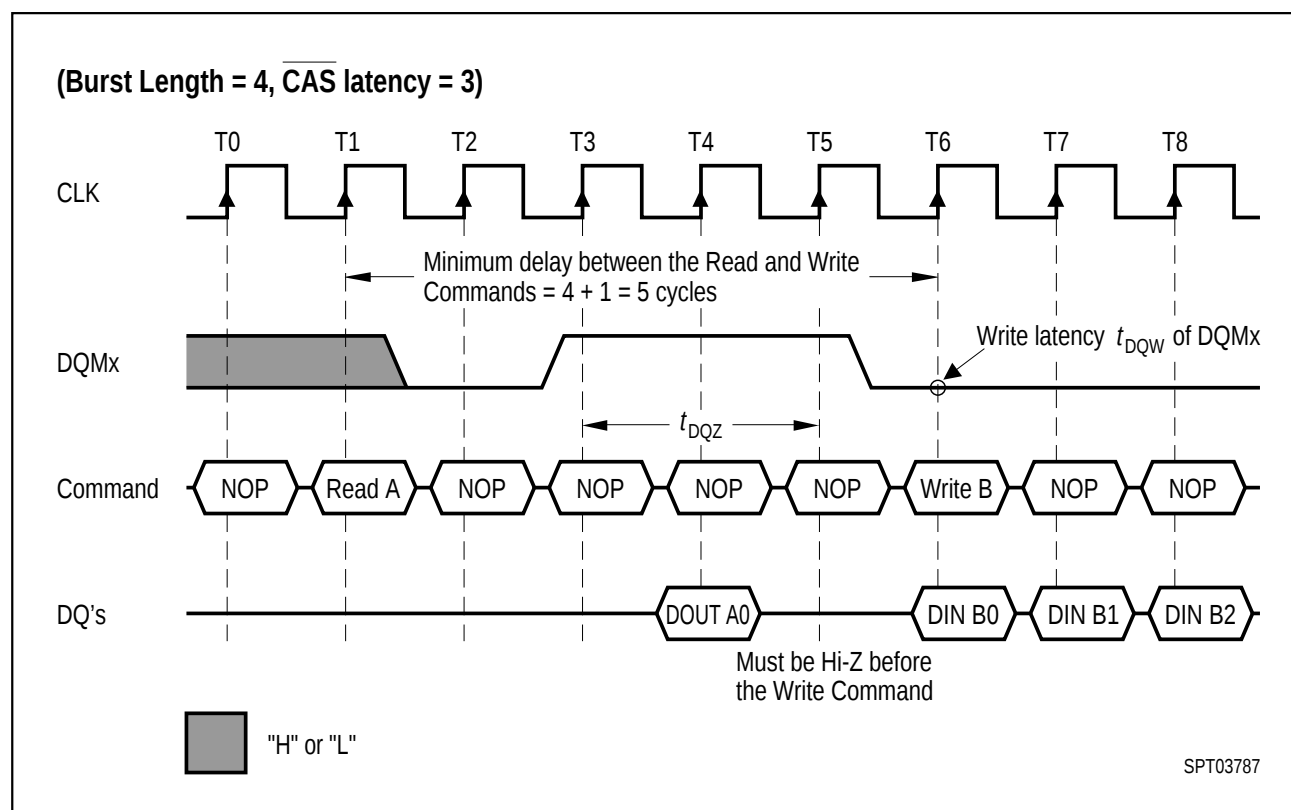


3. Read Interrupted by a Read

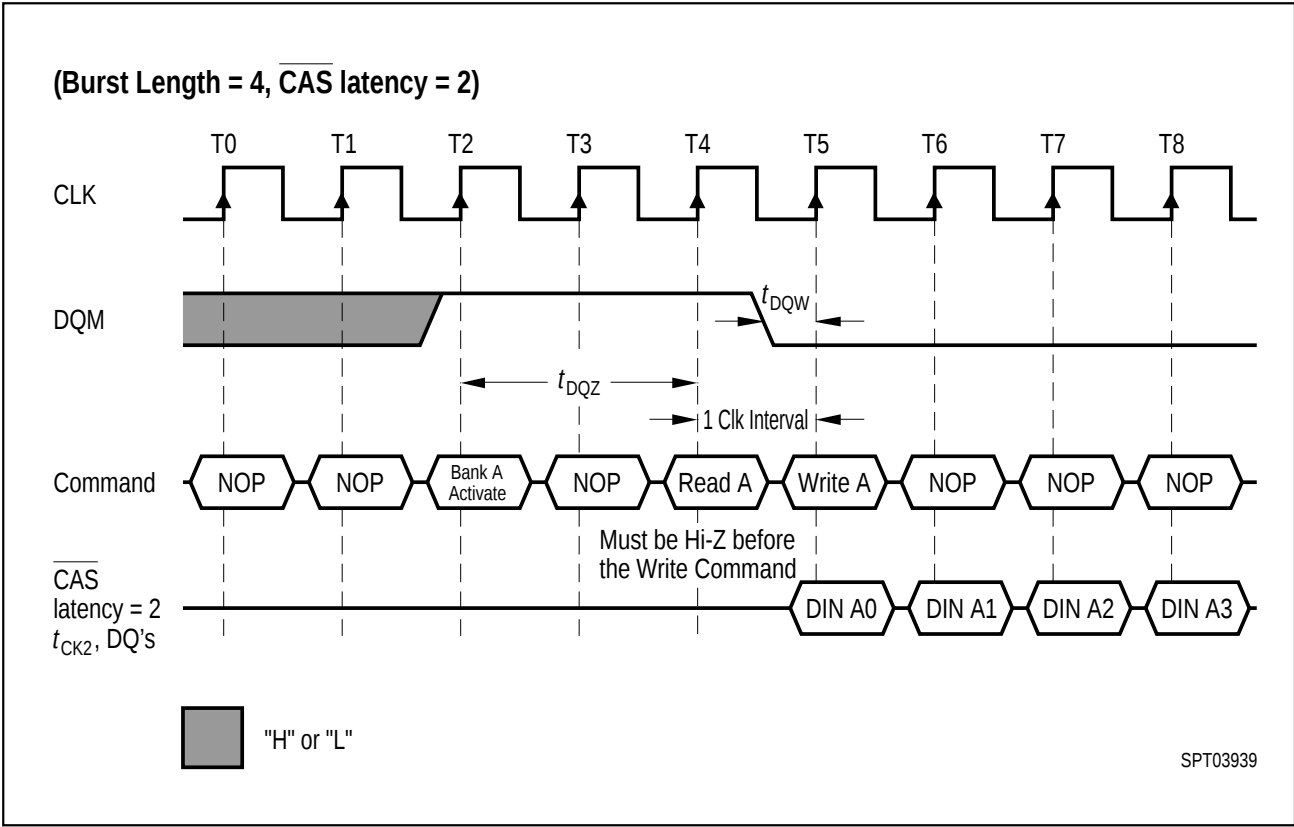


4. Read to Write Interval

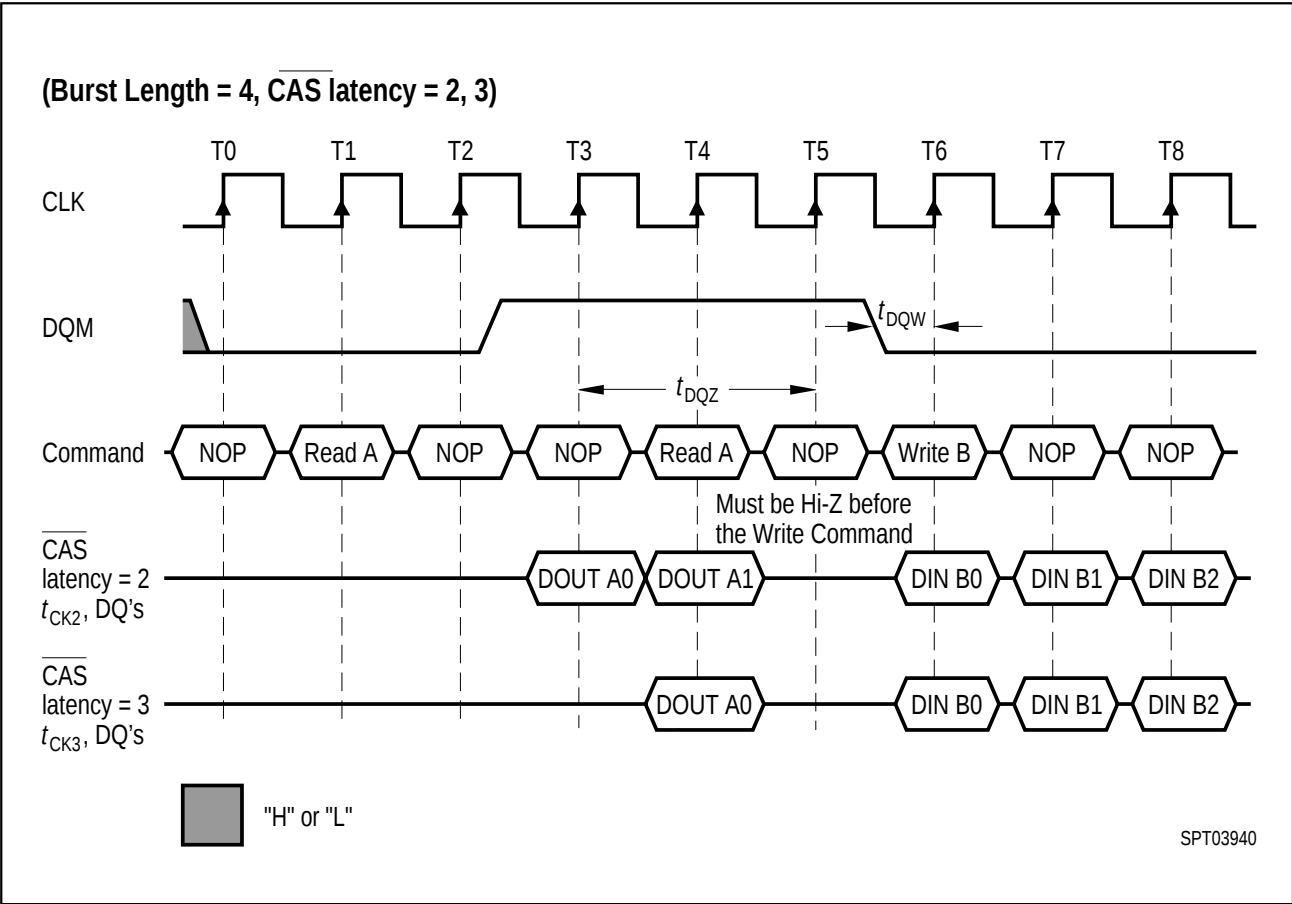
4.1. Read to Write Interval



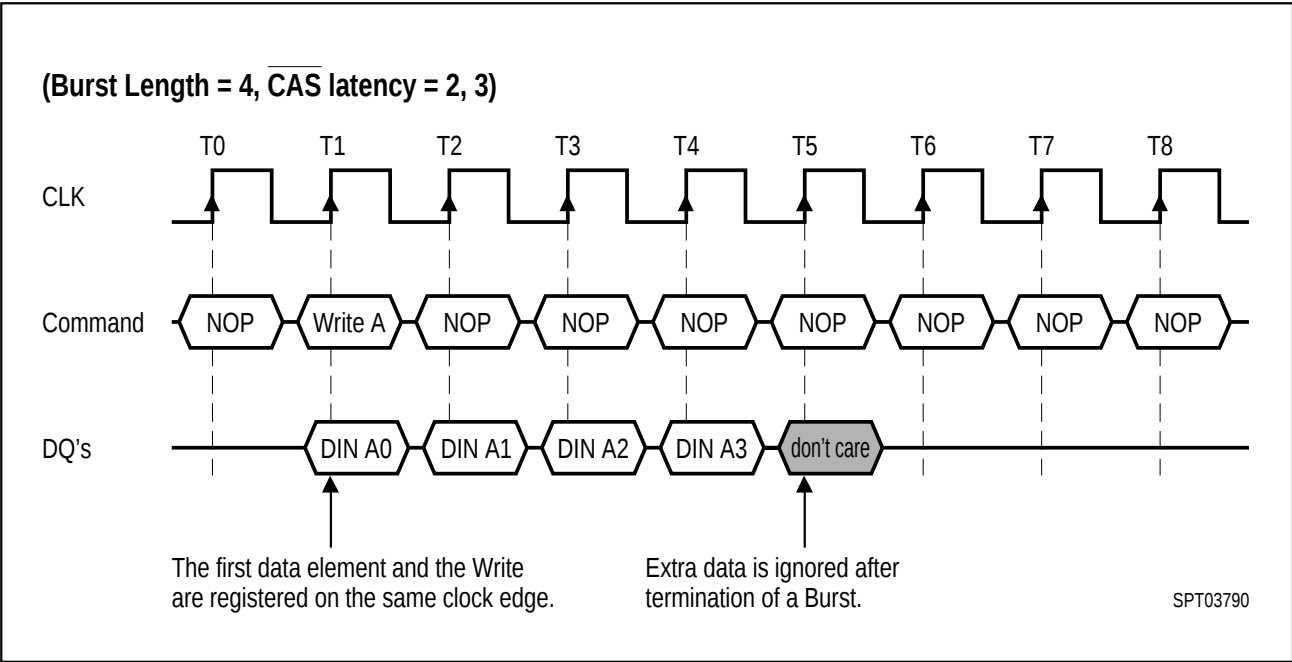
4.2. Minimum Read to Write Interval



4.3. Non-Minimum Read to Write Interval

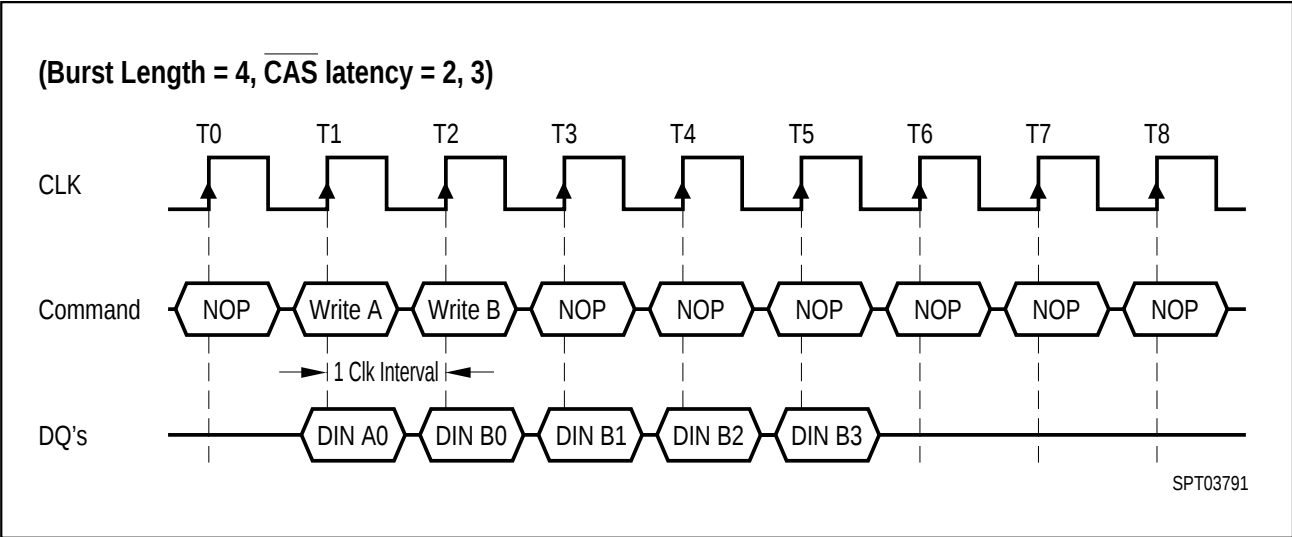


5. Burst Write Operation

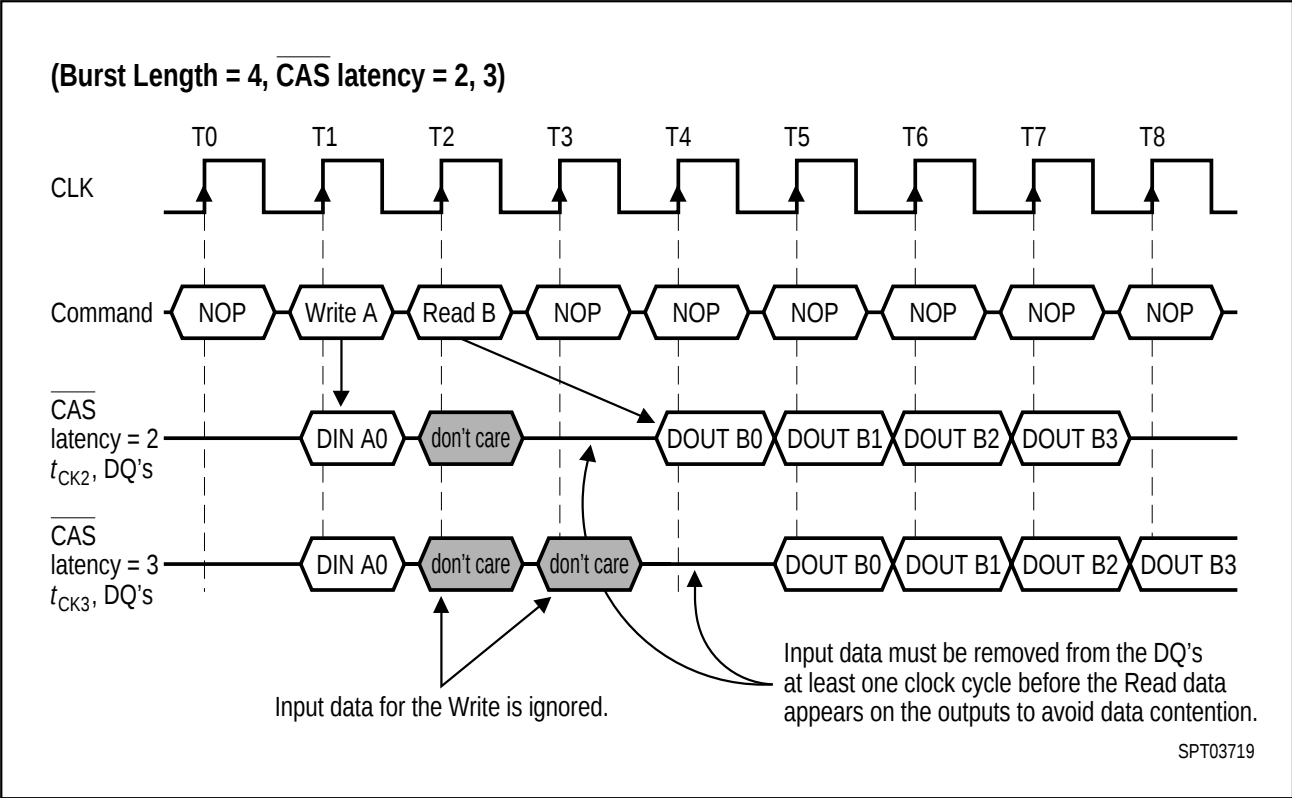


6. Write and Read Interrupt

6.1. Write Interrupted by a Write

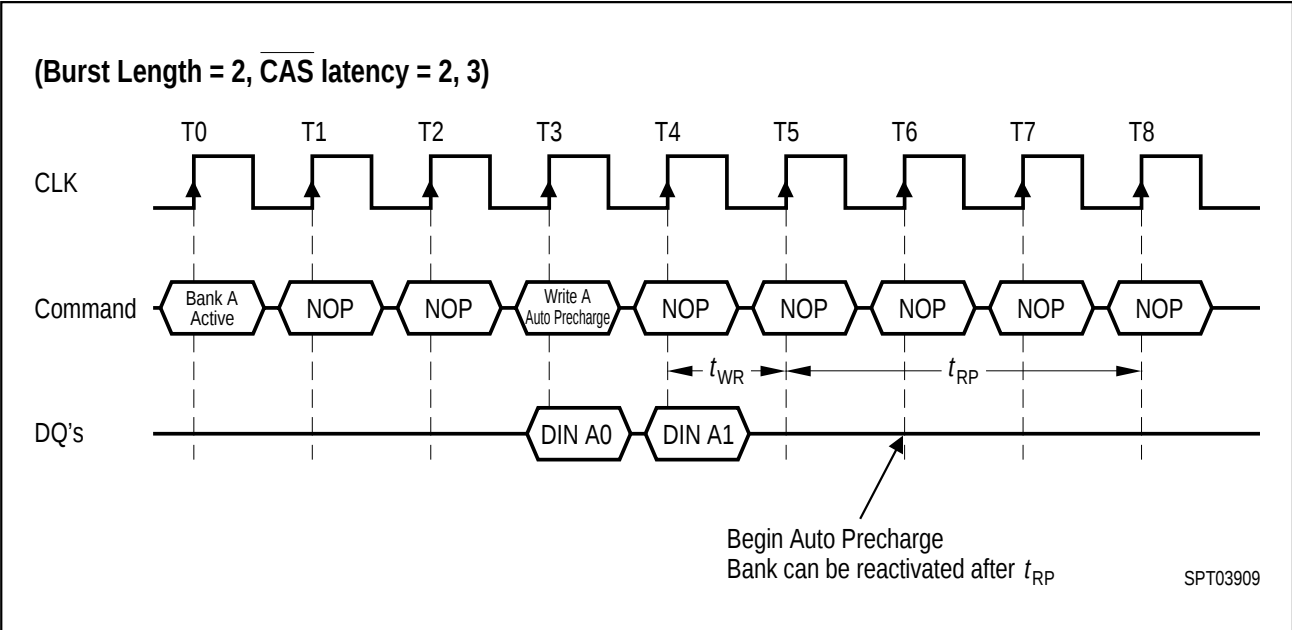


6.2. Write Interrupted by a Read

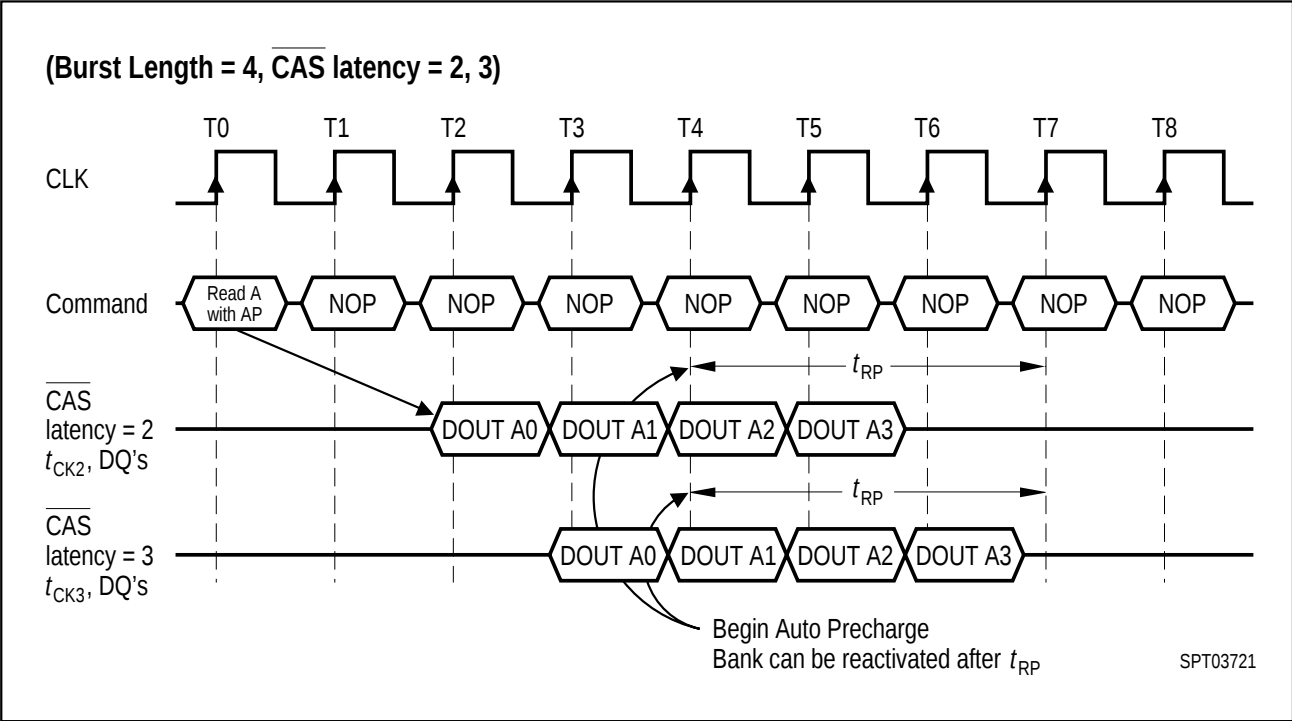


7. Burst Write and Read with Auto Precharge

7.1. Burst Write with Auto Precharge

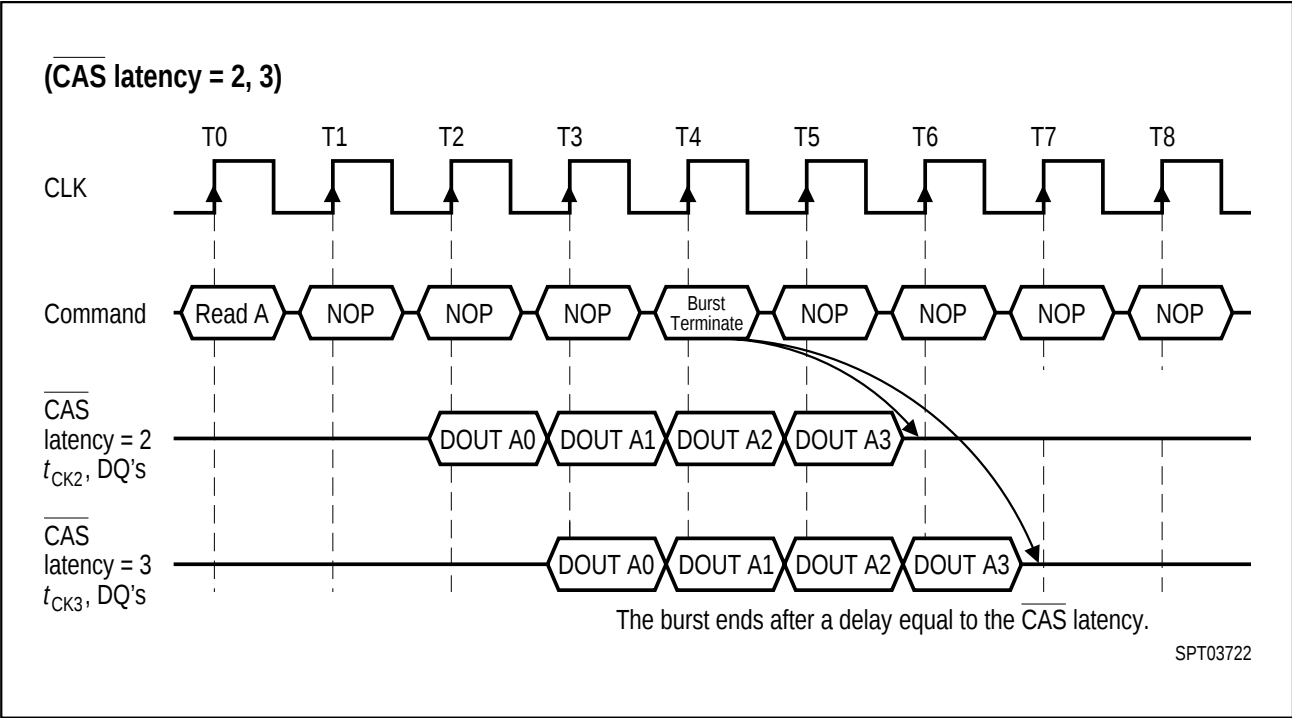


7.2. Burst Read with Auto Precharge

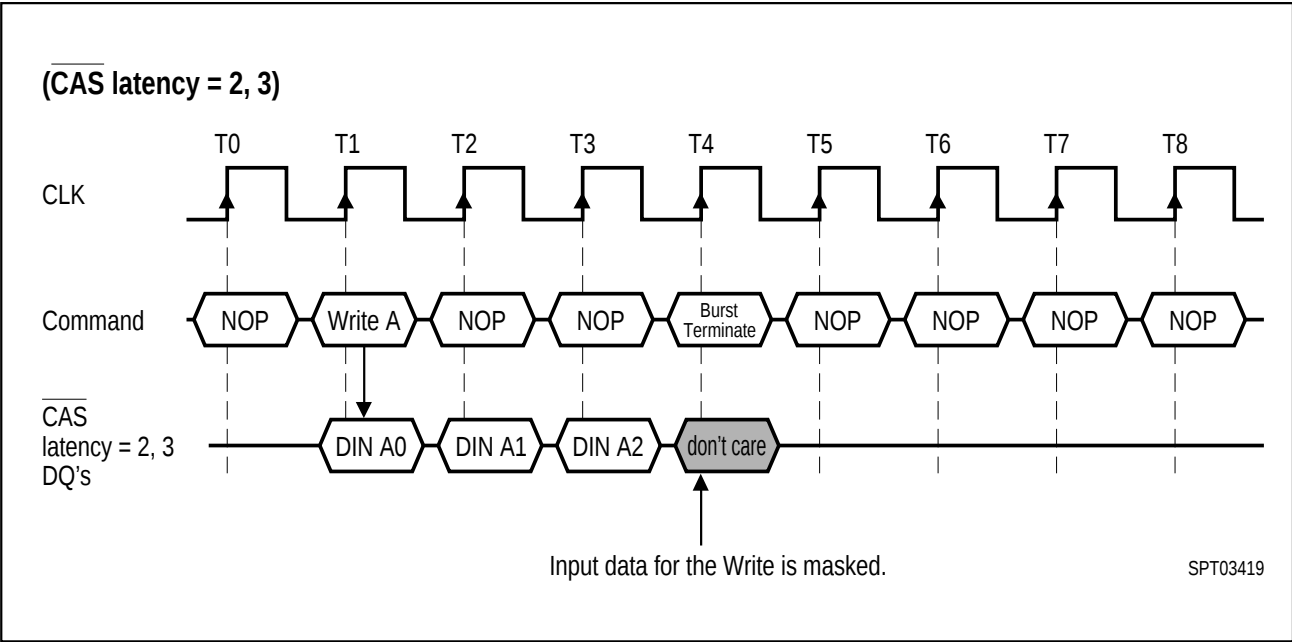


8. Burst Termination

8.1. Termination of a Full Page Burst Read Operation

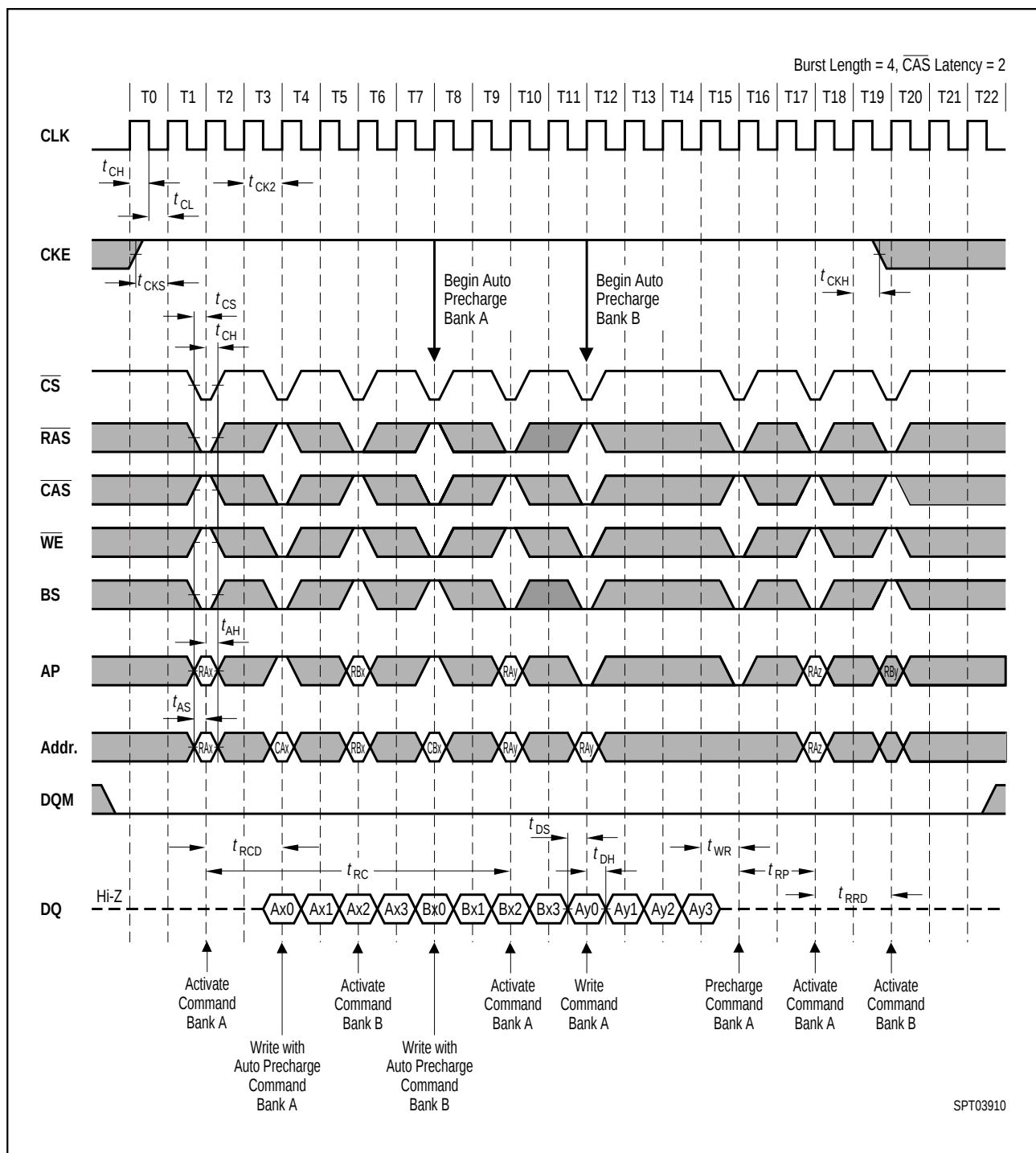


8.2. Termination of a Full Page Burst Write Operation

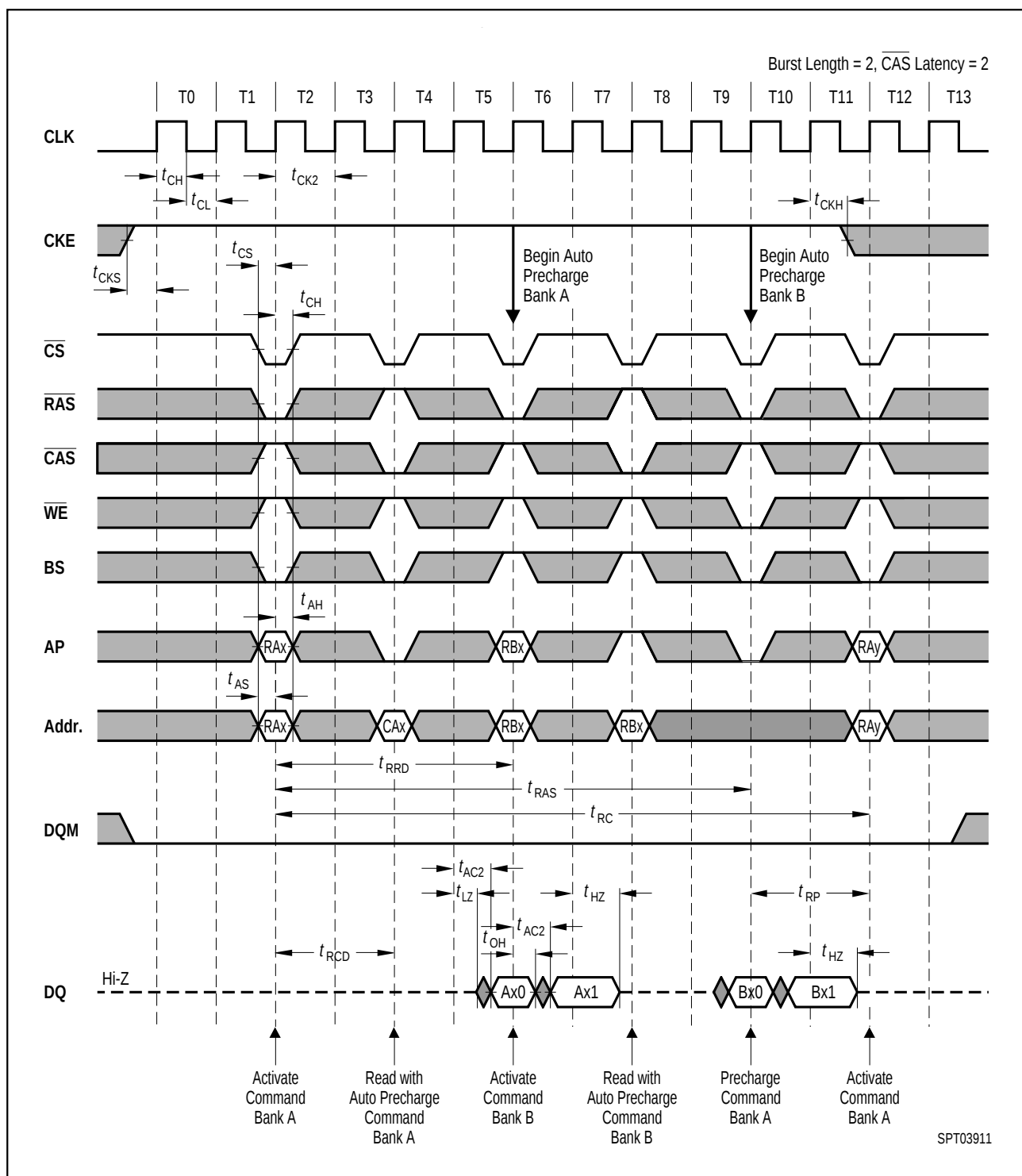


9. AC Parameters

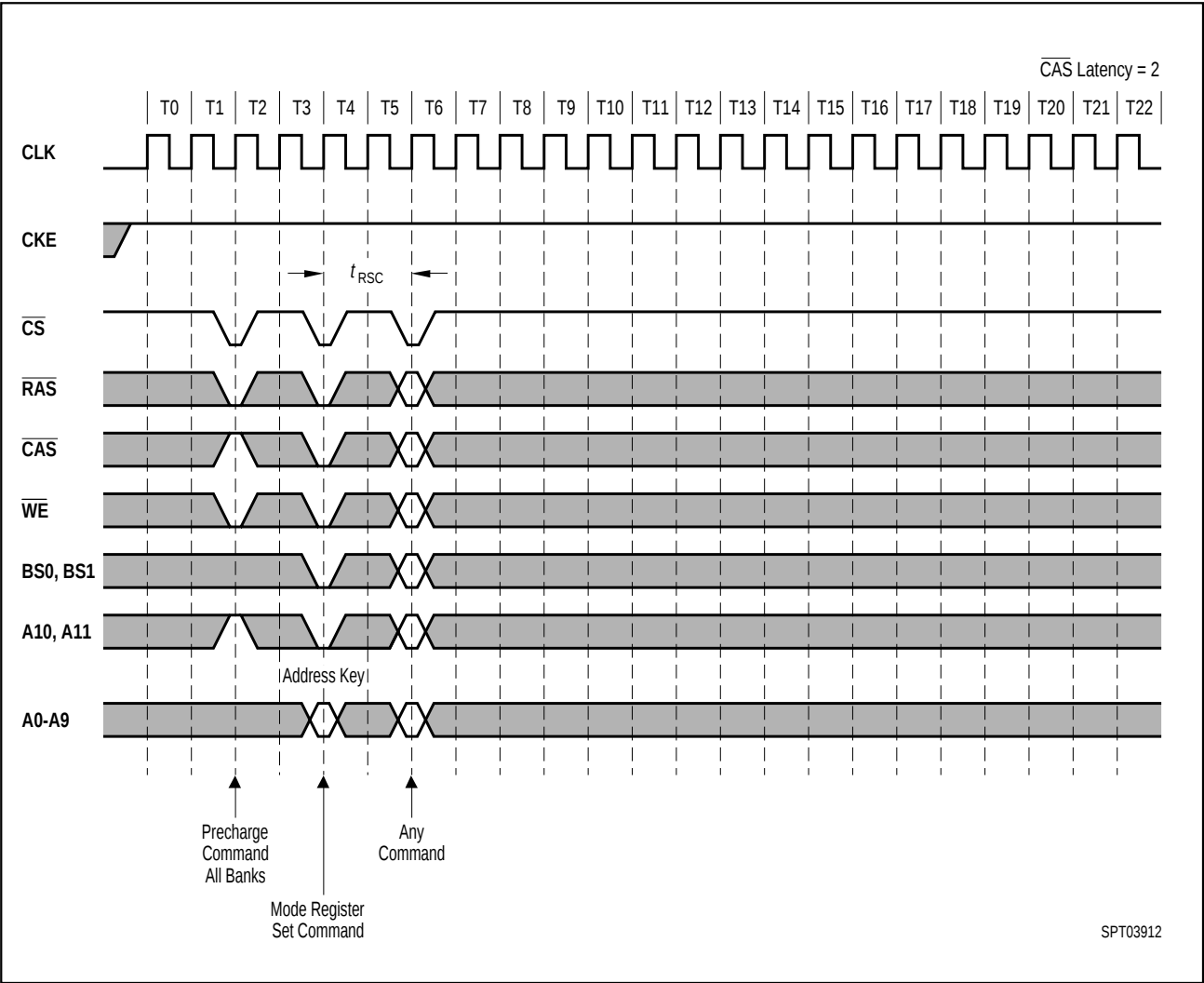
9.1. AC Parameters for a Write Timing



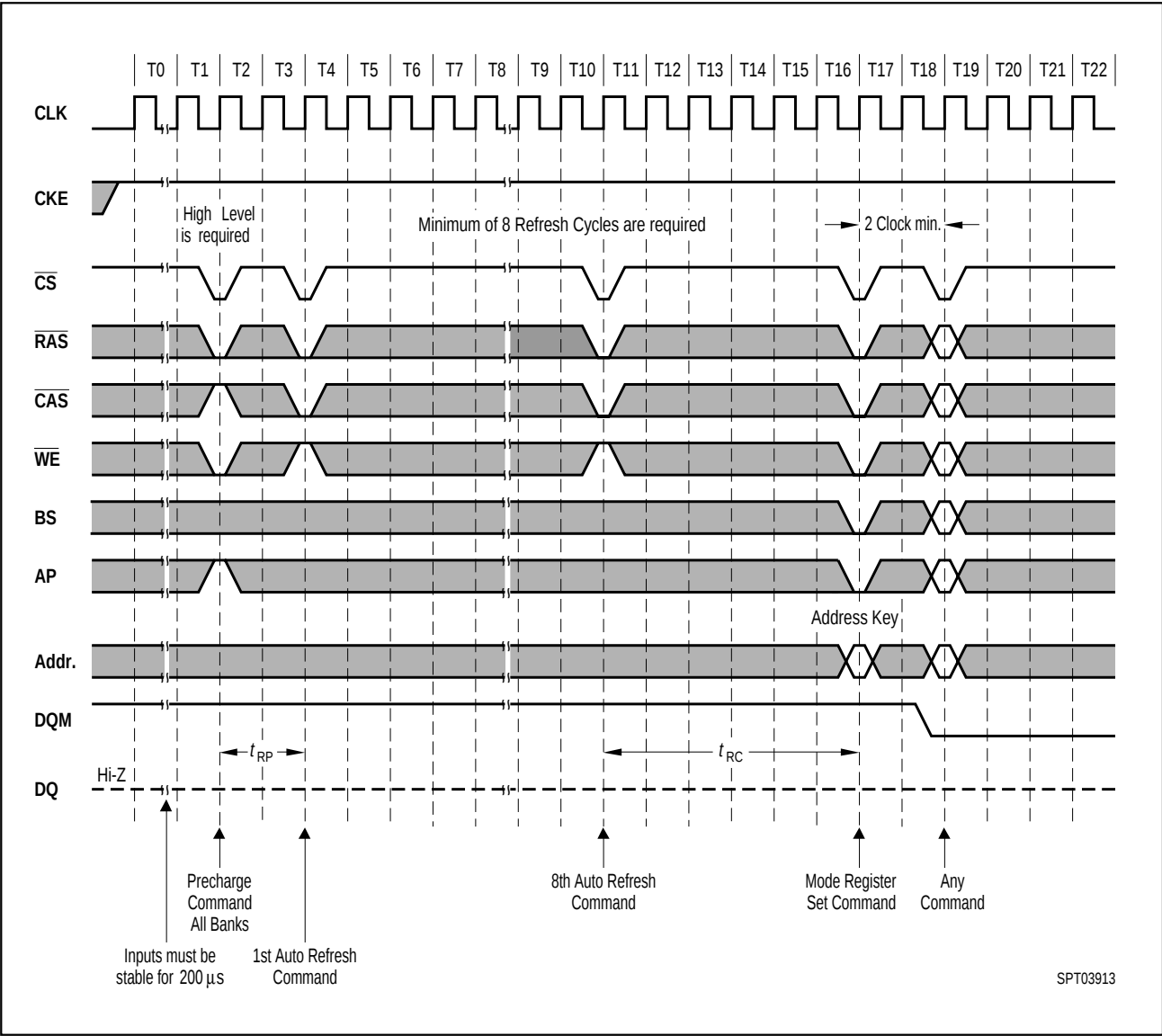
9.2. AC Parameters for a Read Timing



10. Mode Register Set

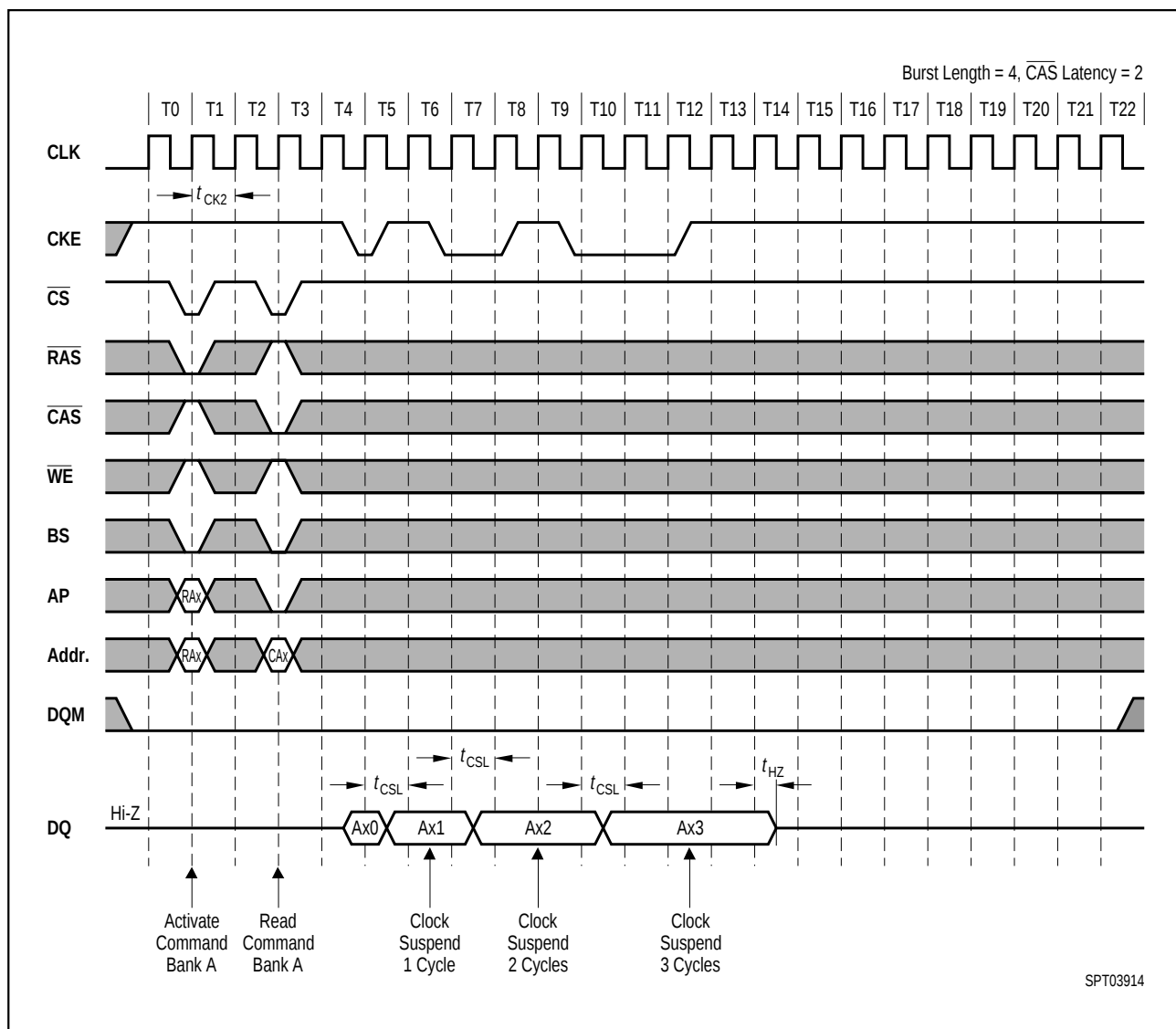


11. Power on Sequence and Auto Refresh (CBR)

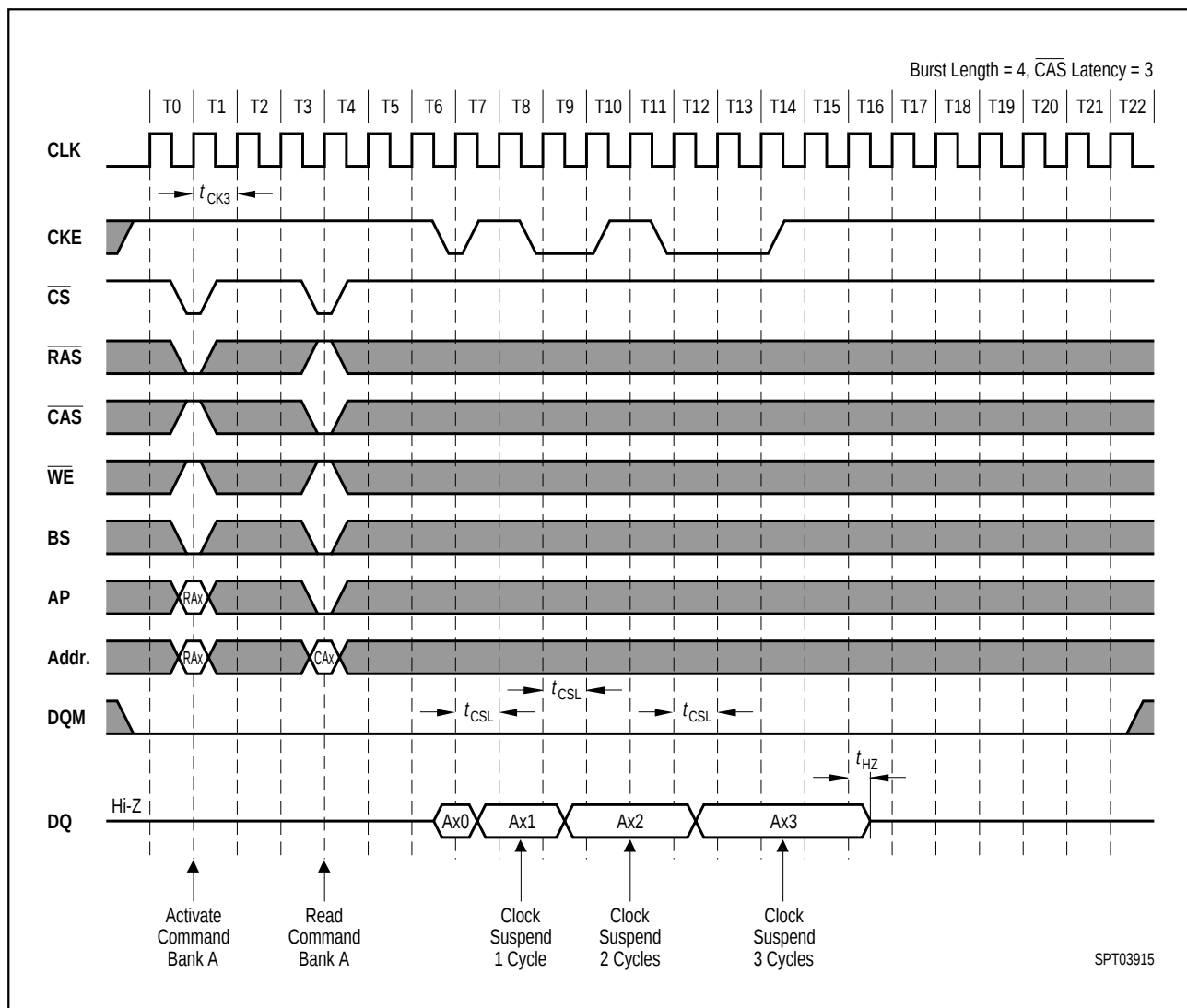


12. Clock Suspension (Using CKE)

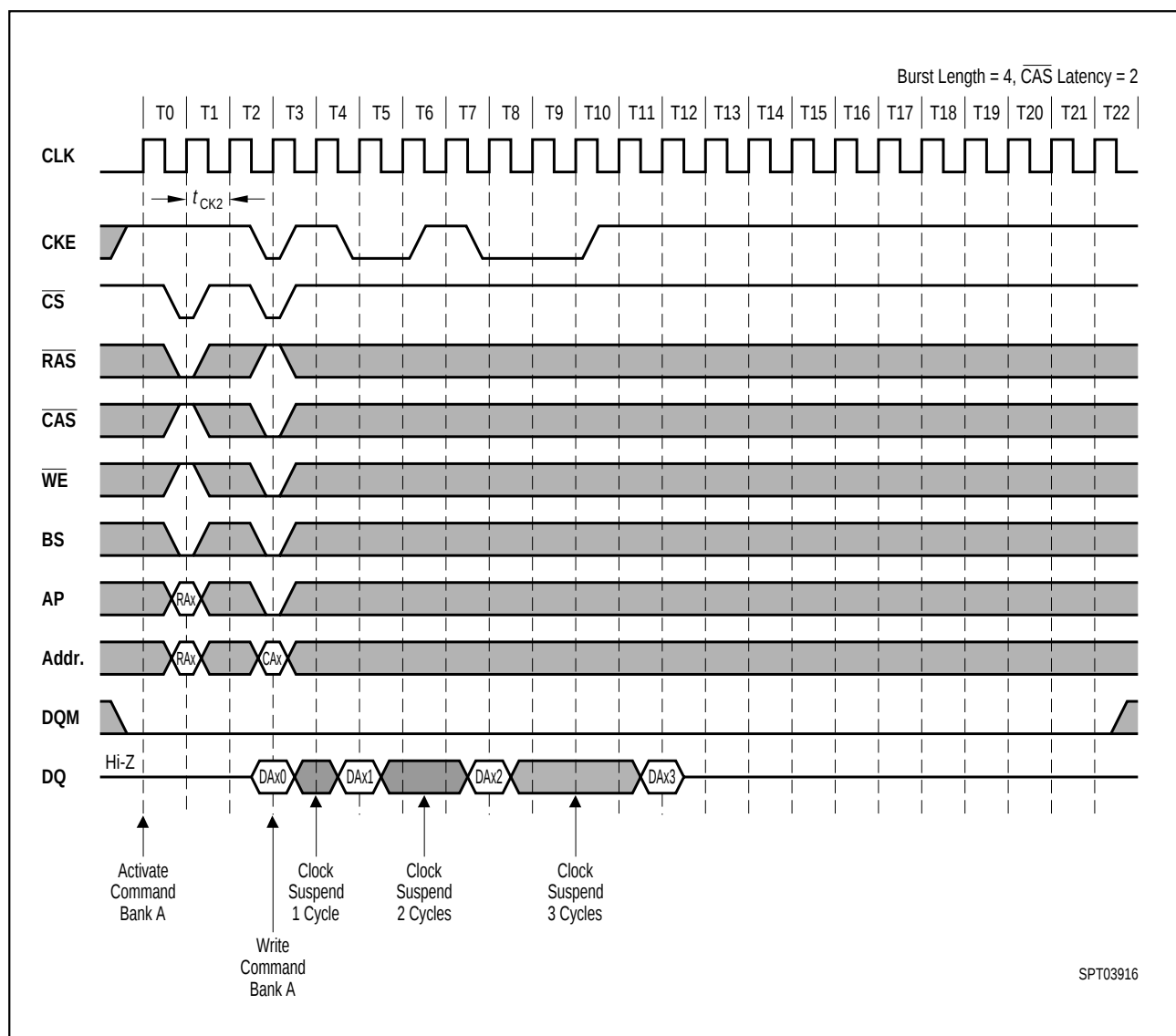
12.1. Clock Suspension During Burst Read $\overline{\text{CAS}}$ Latency = 2



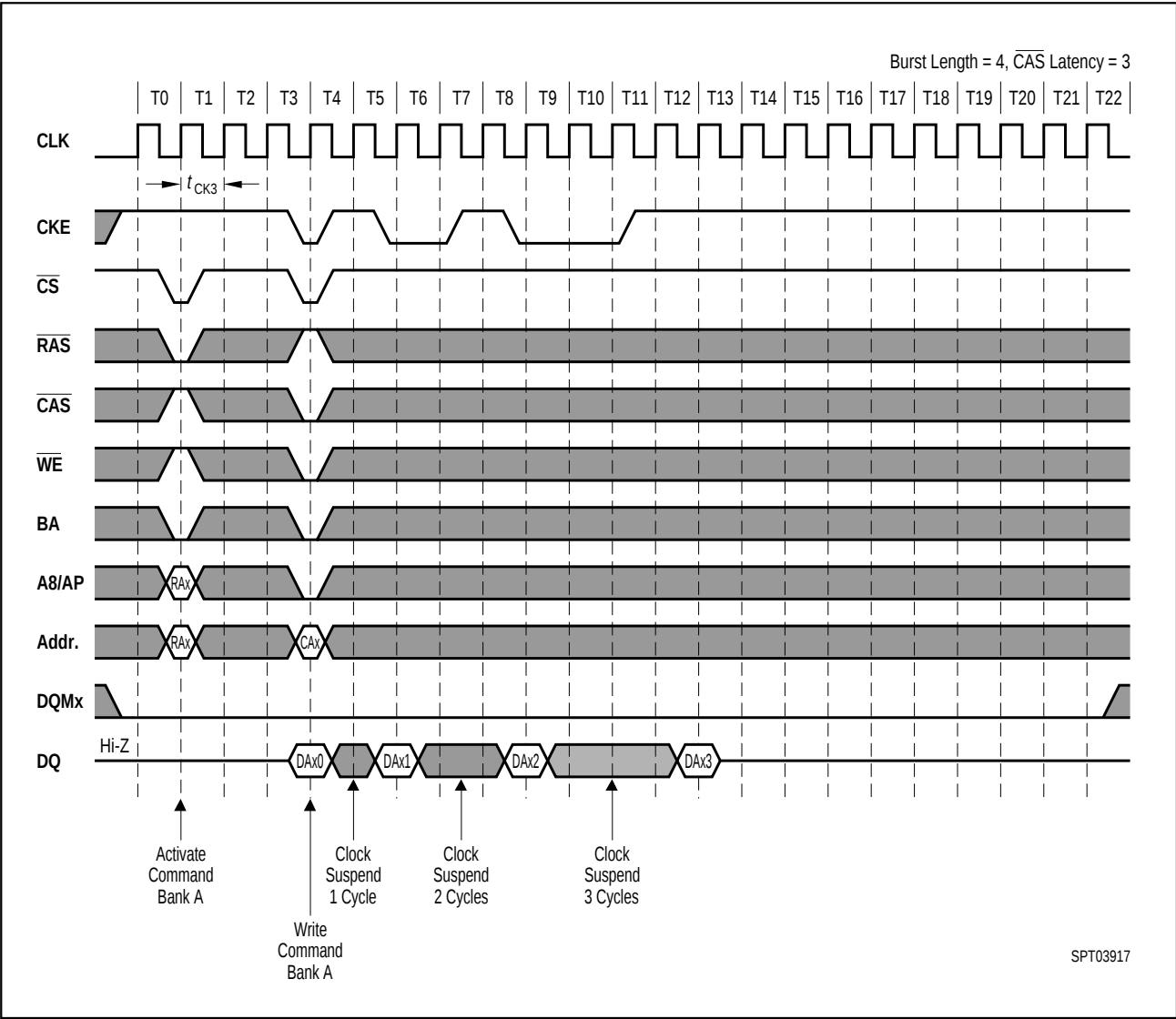
12.2. Clock Suspension During Burst Read $\overline{\text{CAS}}$ Latency = 3



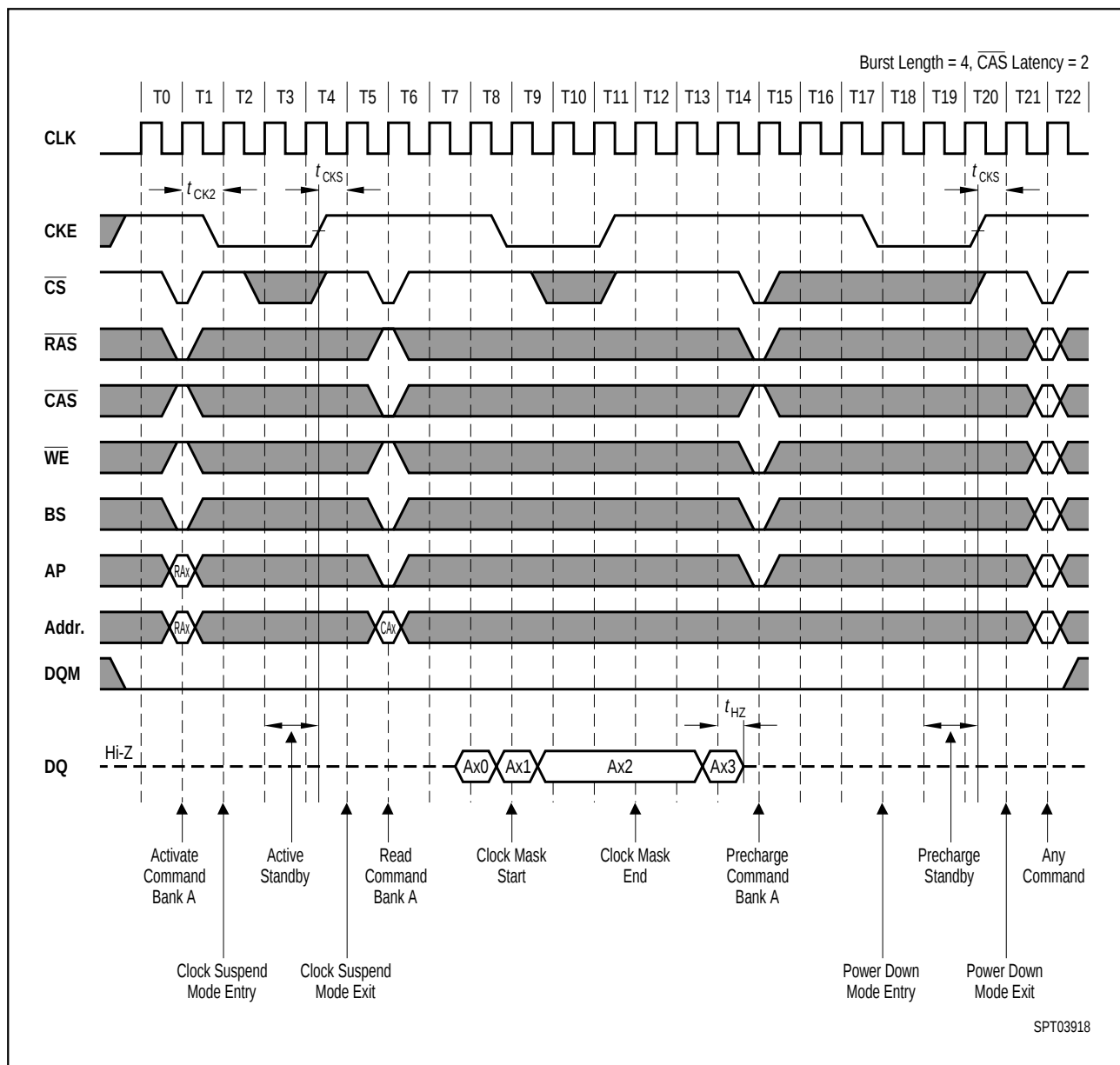
12.3. Clock Suspension During Burst Write $\overline{\text{CAS}}$ Latency = 2



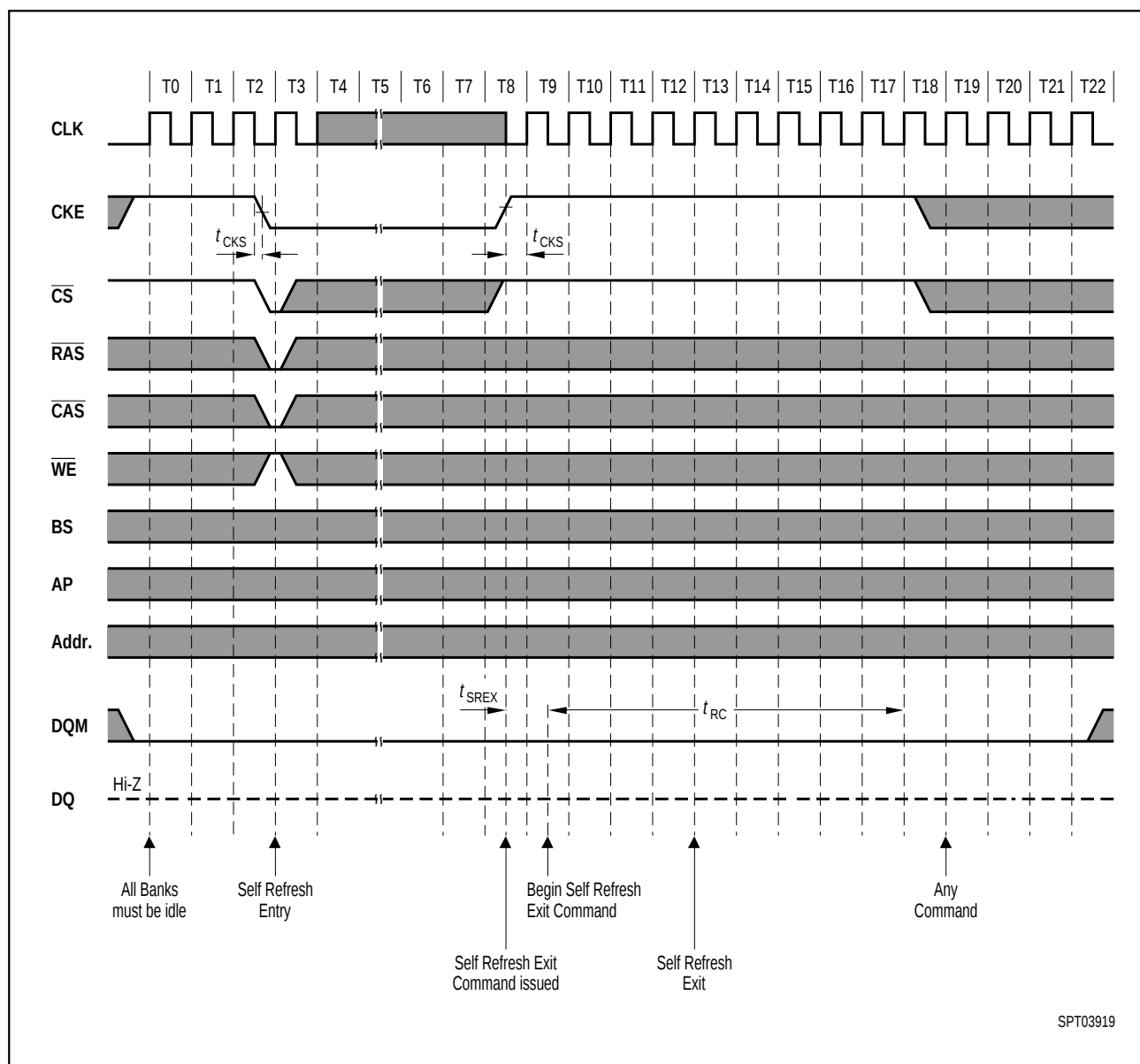
12.4. Clock Suspension During Burst Write $\overline{\text{CAS}}$ Latency = 3



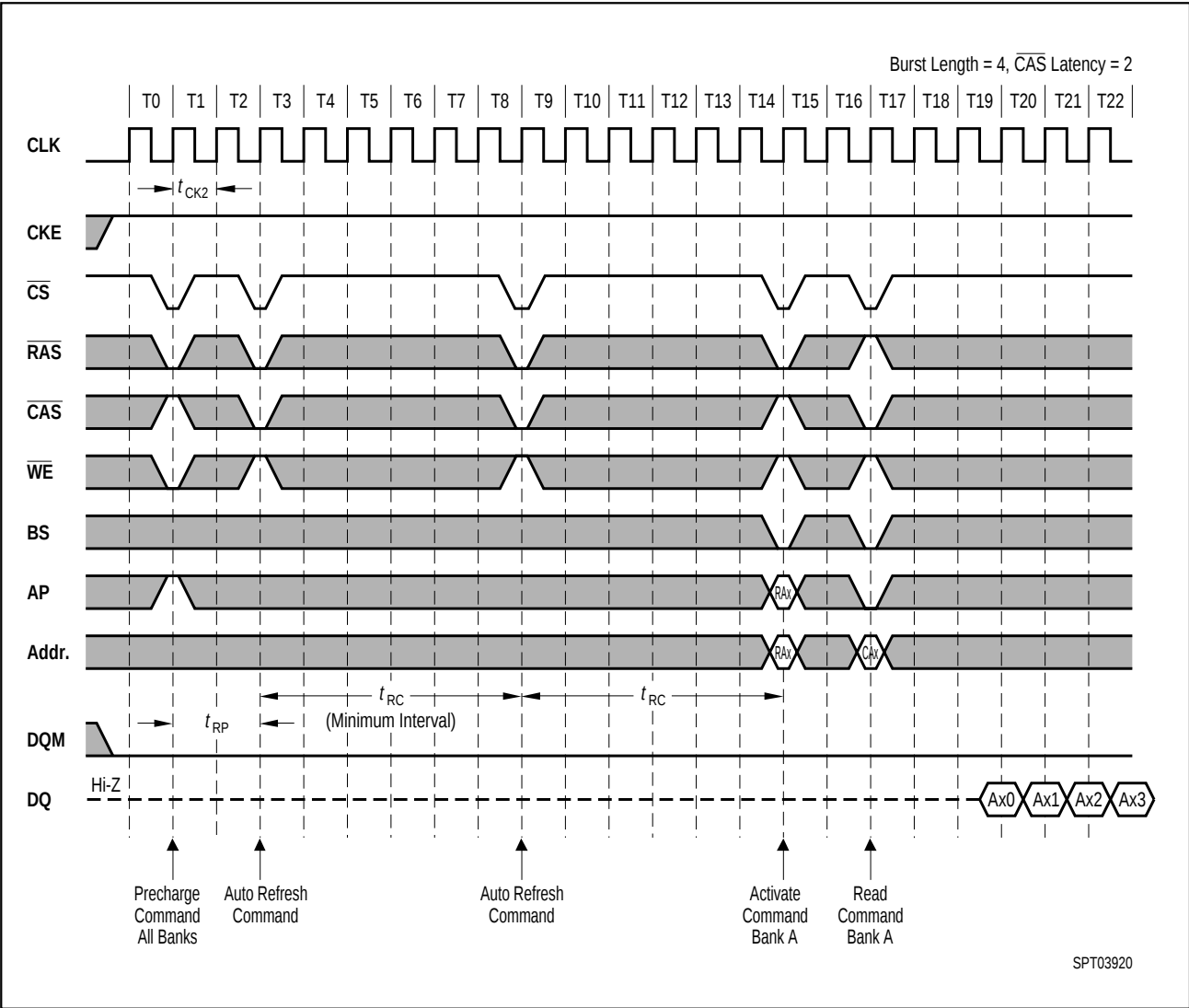
13. Power Down Mode and Clock Suspend



14. Self Refresh (Entry and Exit)

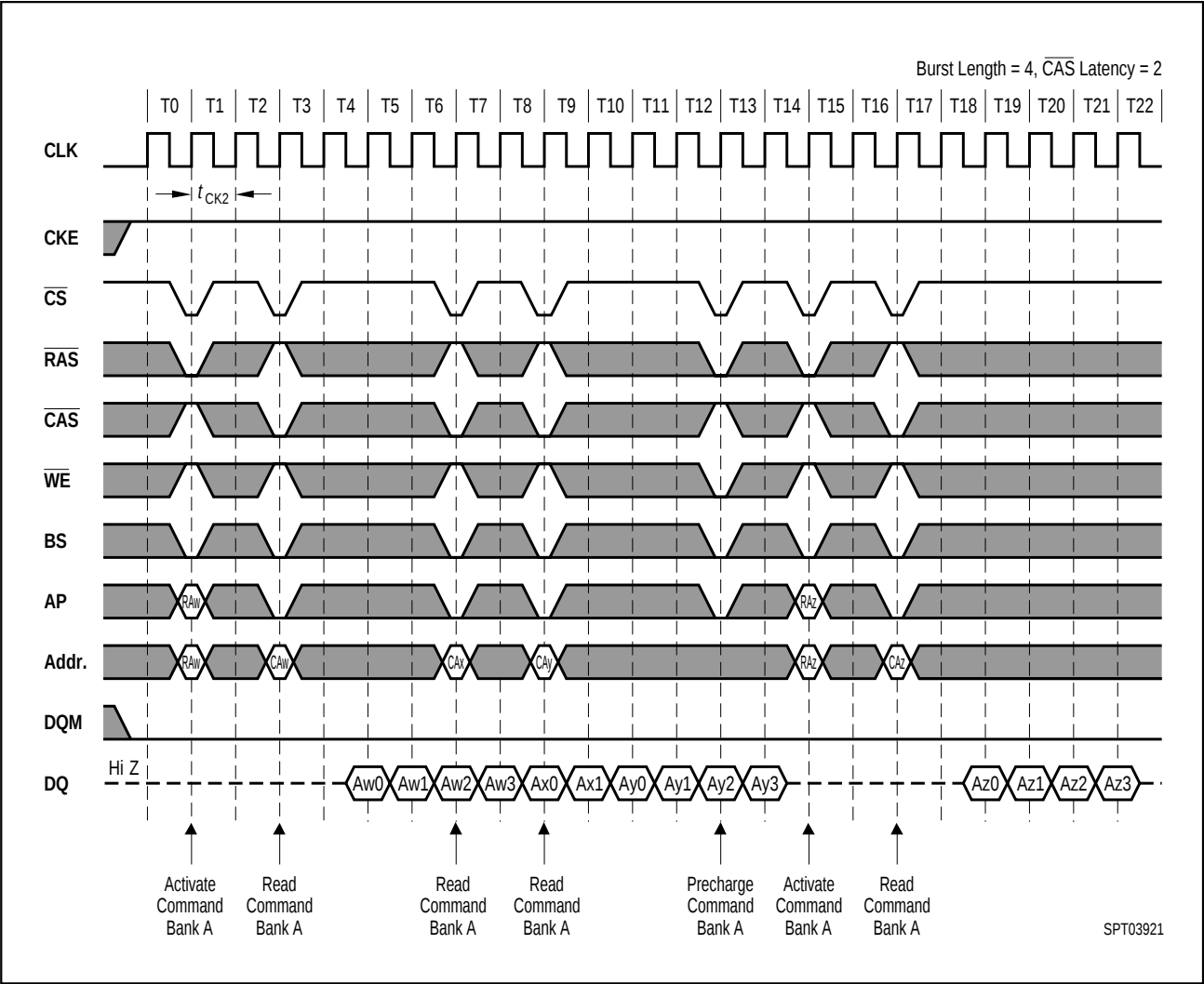


15. Auto Refresh (CBR)

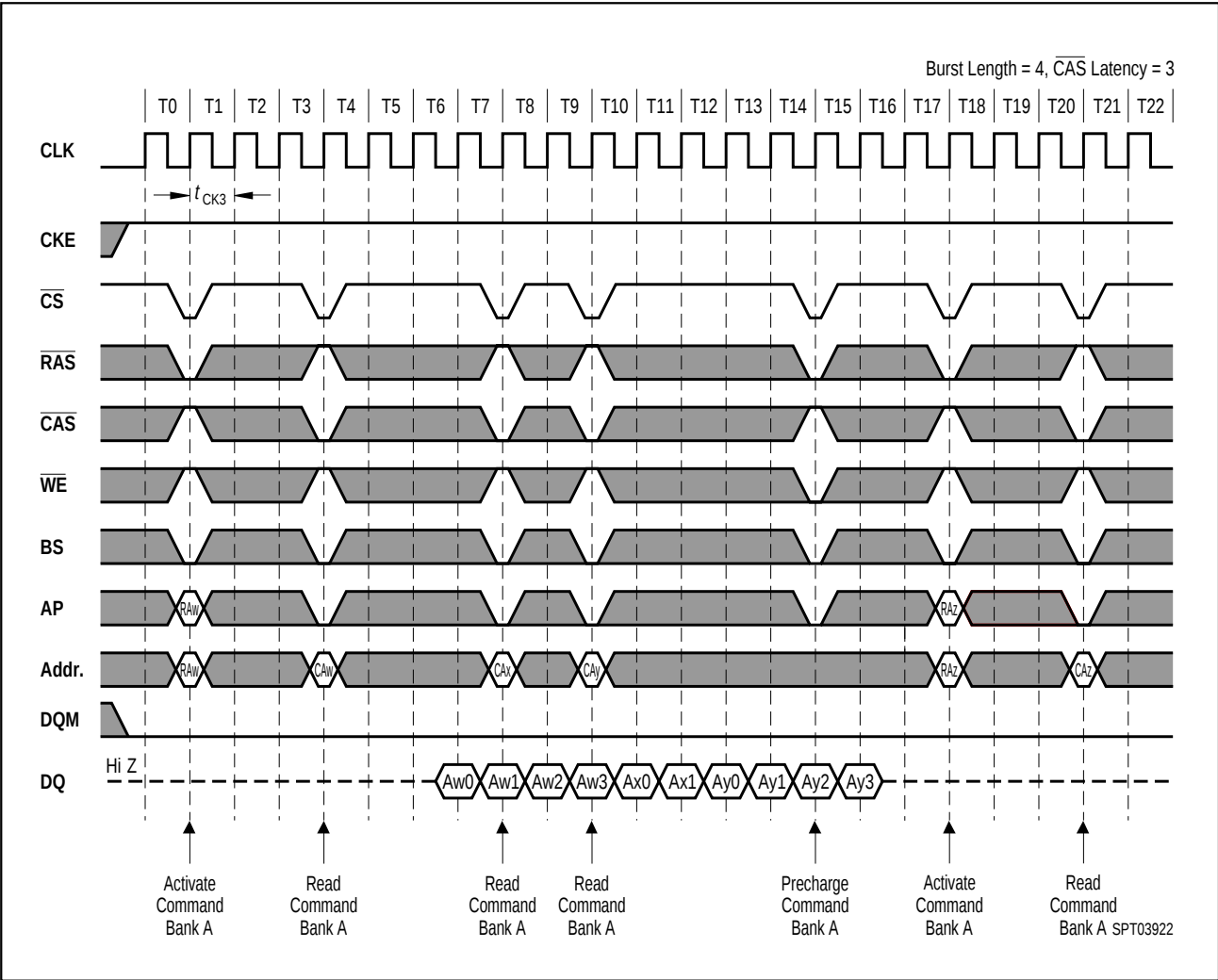


16. Random Column Read (Page within same Bank)

16.1. $\overline{\text{CAS}}$ Latency = 2

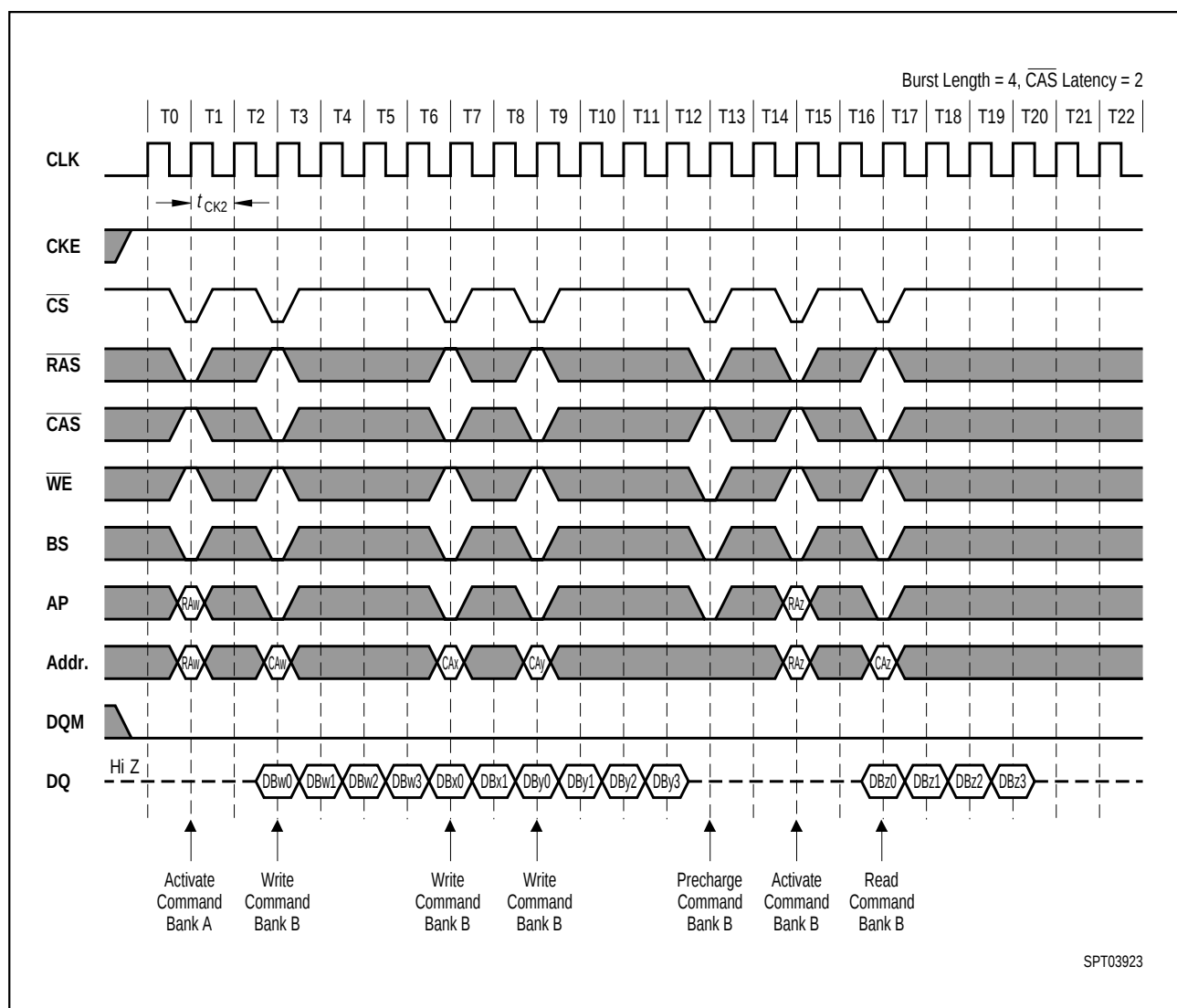


16.2. $\overline{\text{CAS}}$ Latency = 3

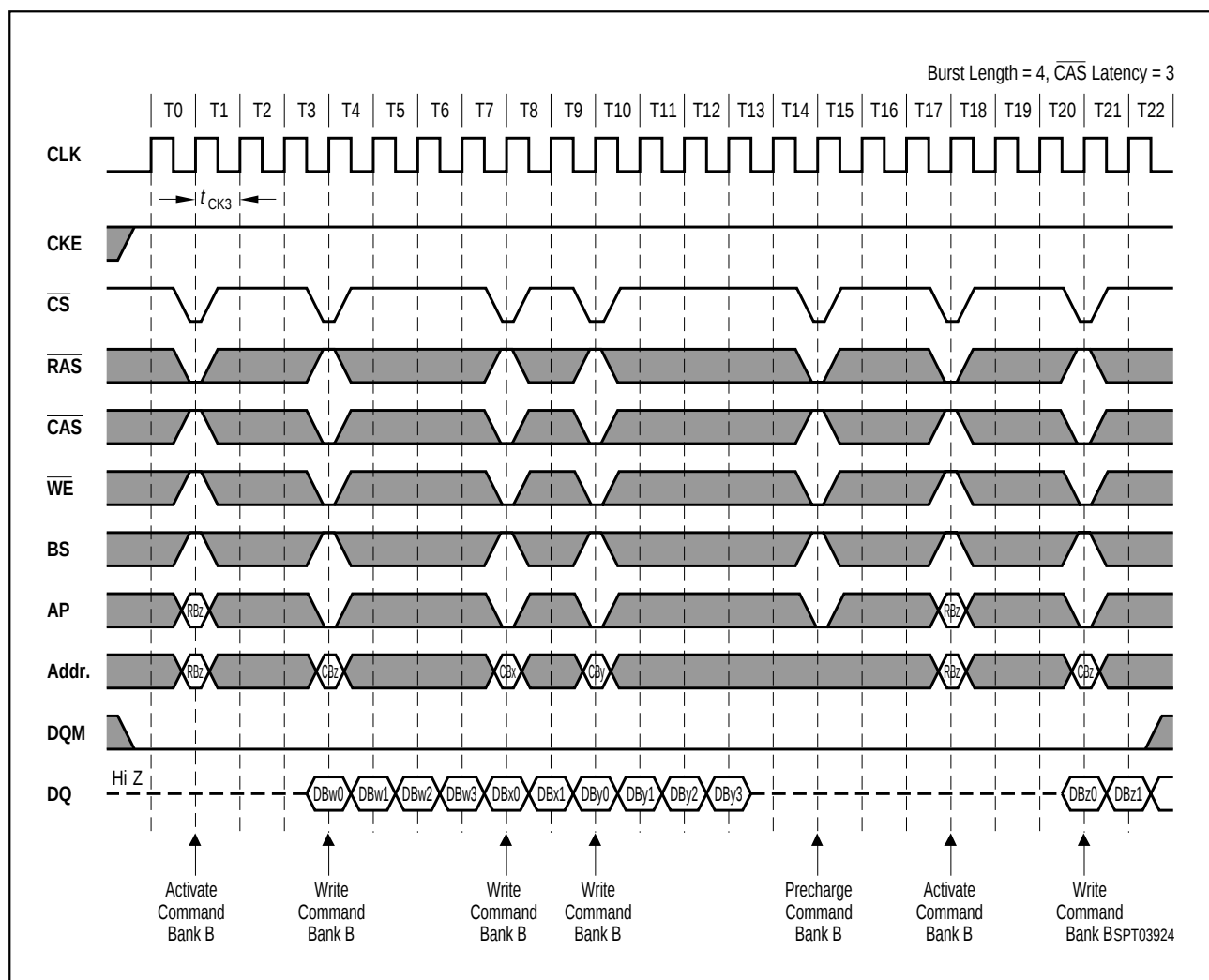


17. Random Column Write (Page within same Bank)

17.1. $\overline{\text{CAS}}$ Latency = 2

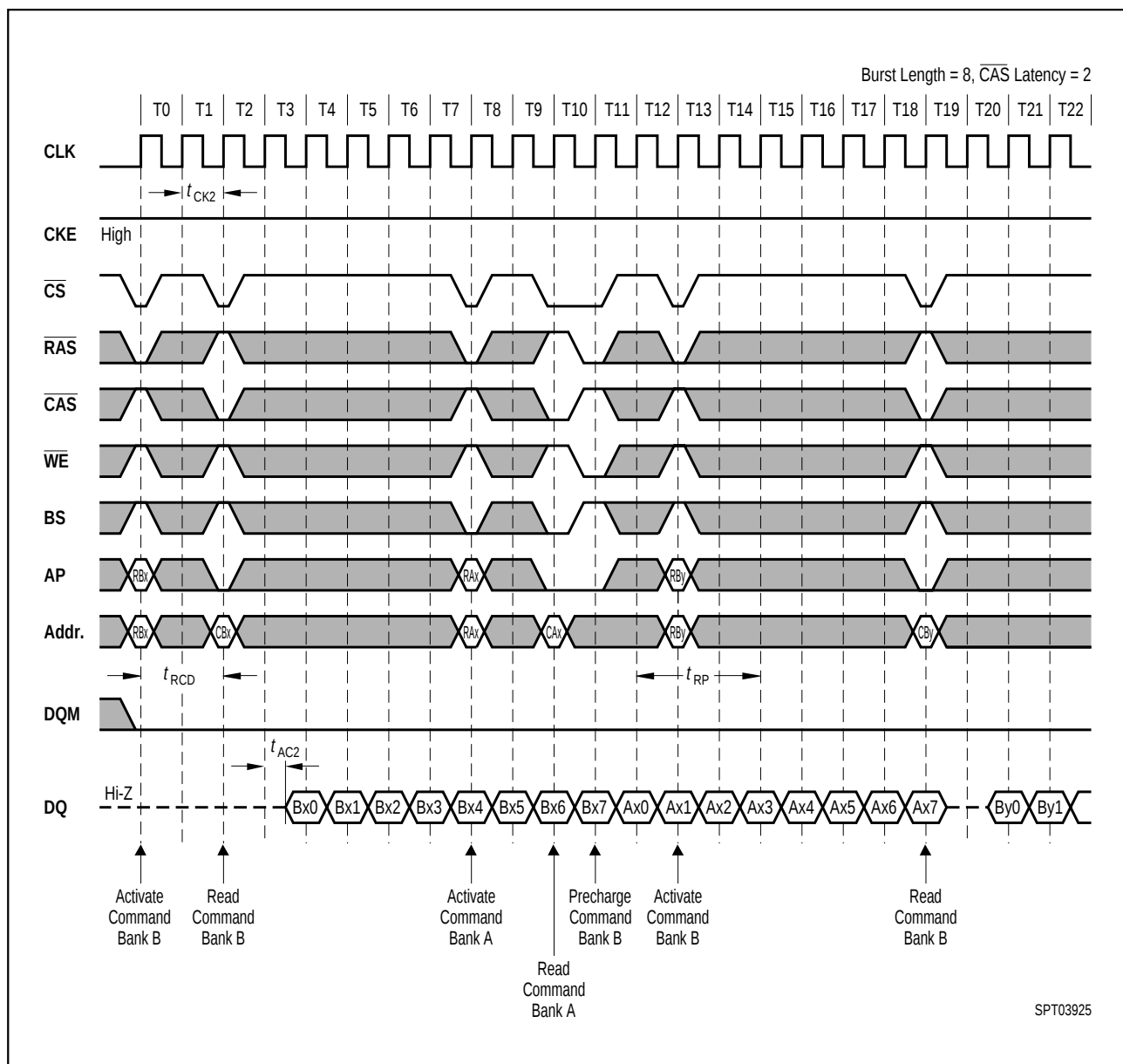


17.2. $\overline{\text{CAS}}$ Latency = 3

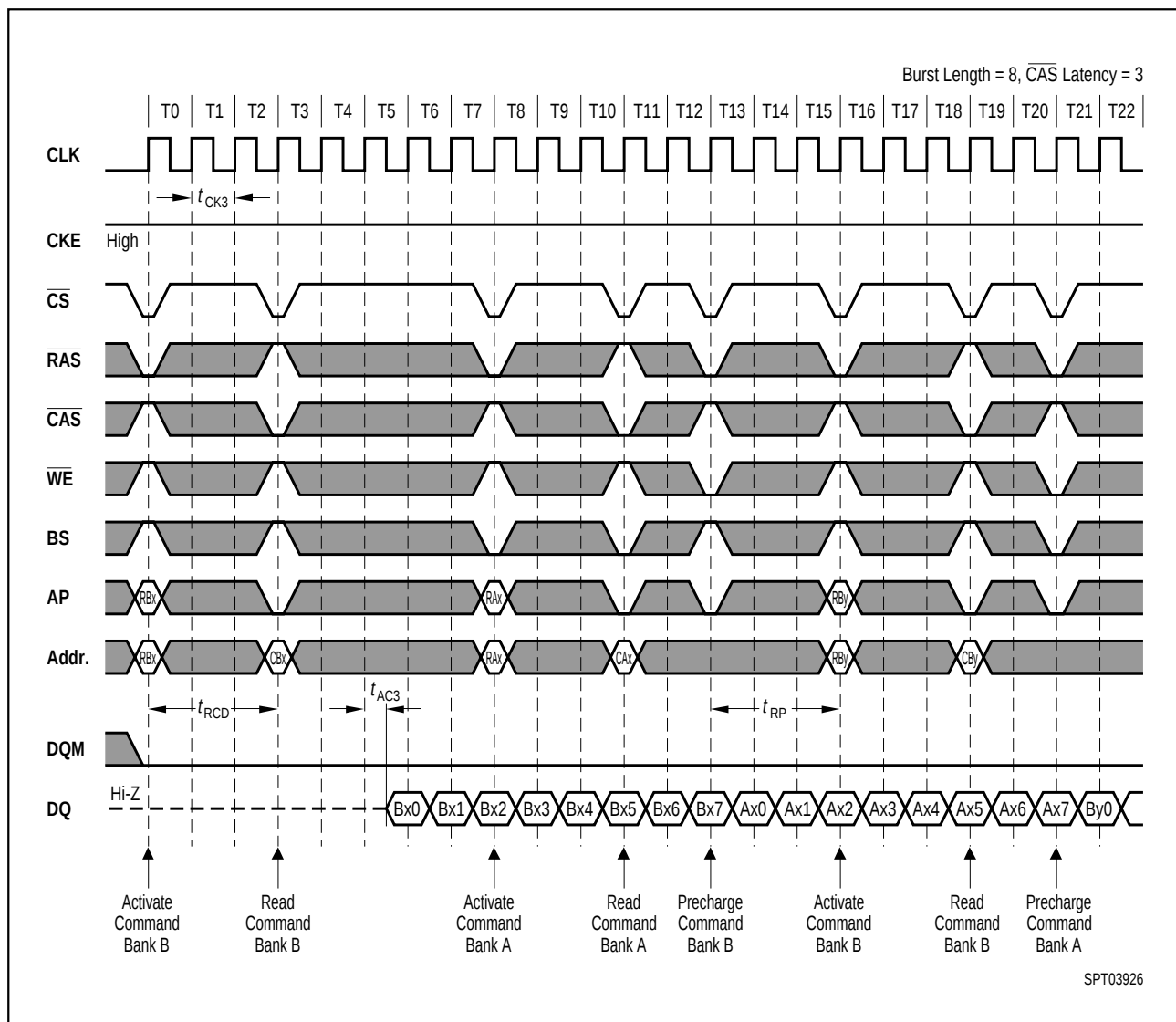


18. Random Row Read (Interleaving Banks) with Precharge

18.1. $\overline{\text{CAS}}$ Latency = 2

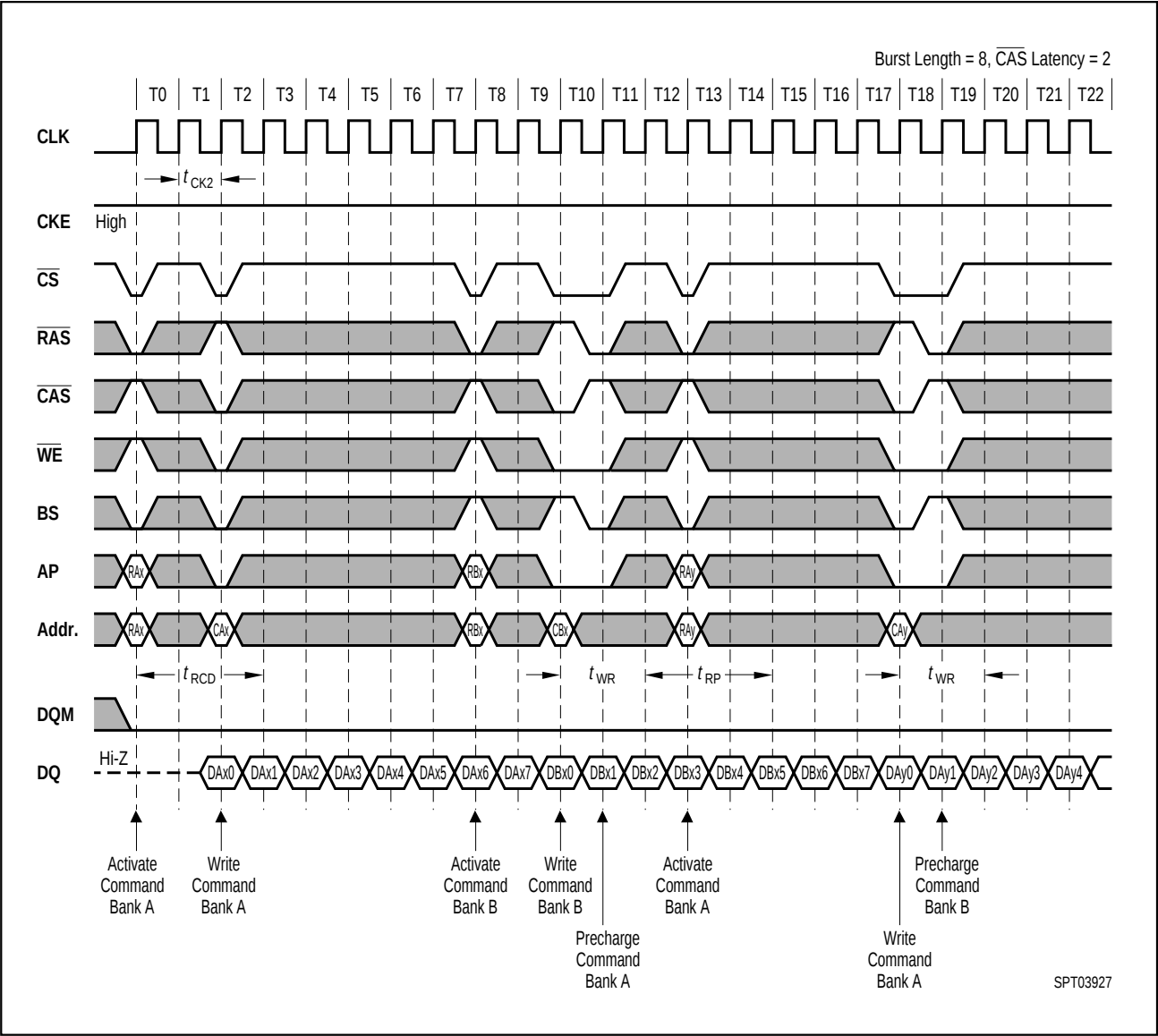


18.2. $\overline{\text{CAS}}$ Latency = 3

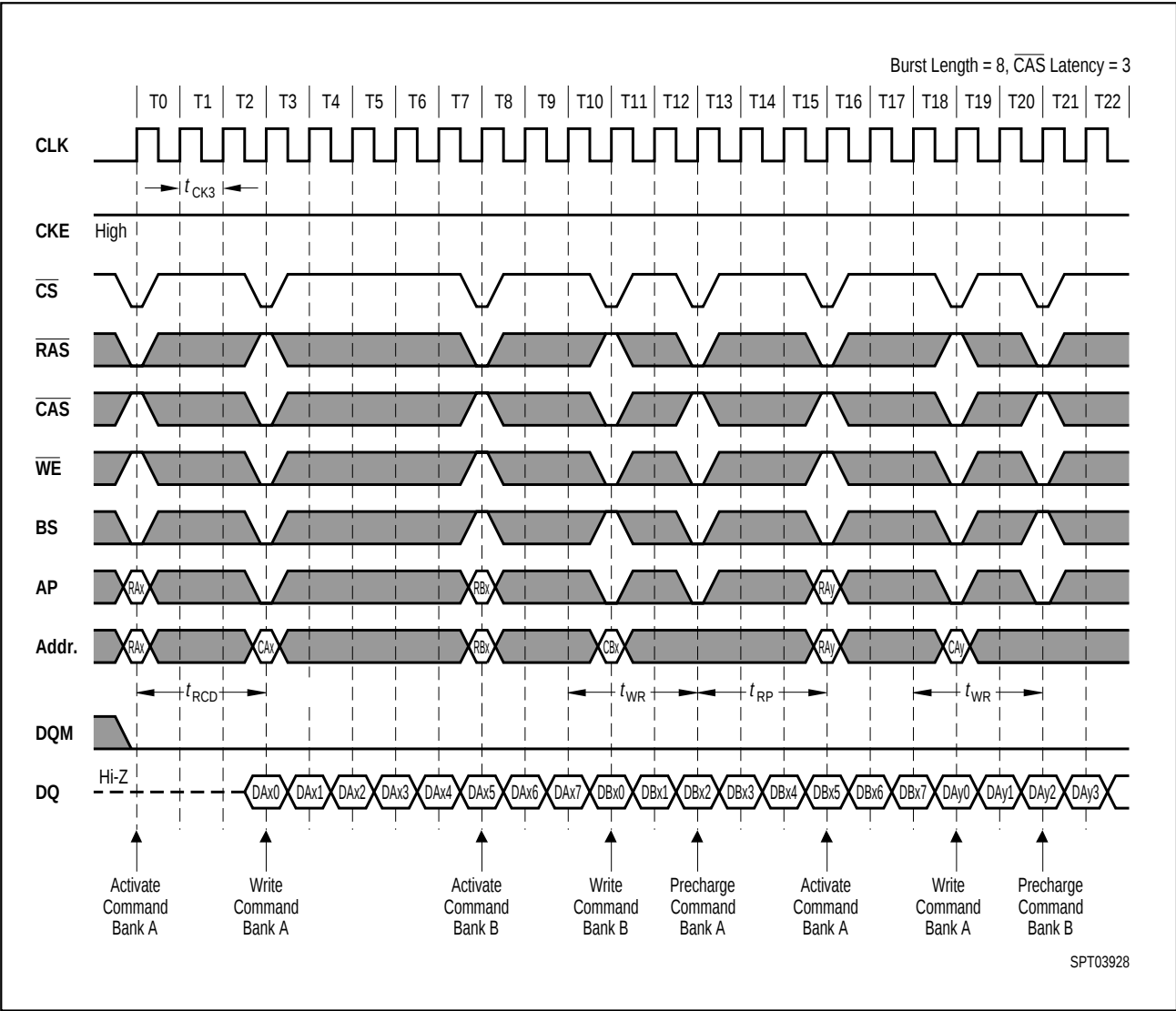


19. Random Row Write (Interleaving Banks) with Precharge

19.1. $\overline{\text{CAS}}$ Latency = 2

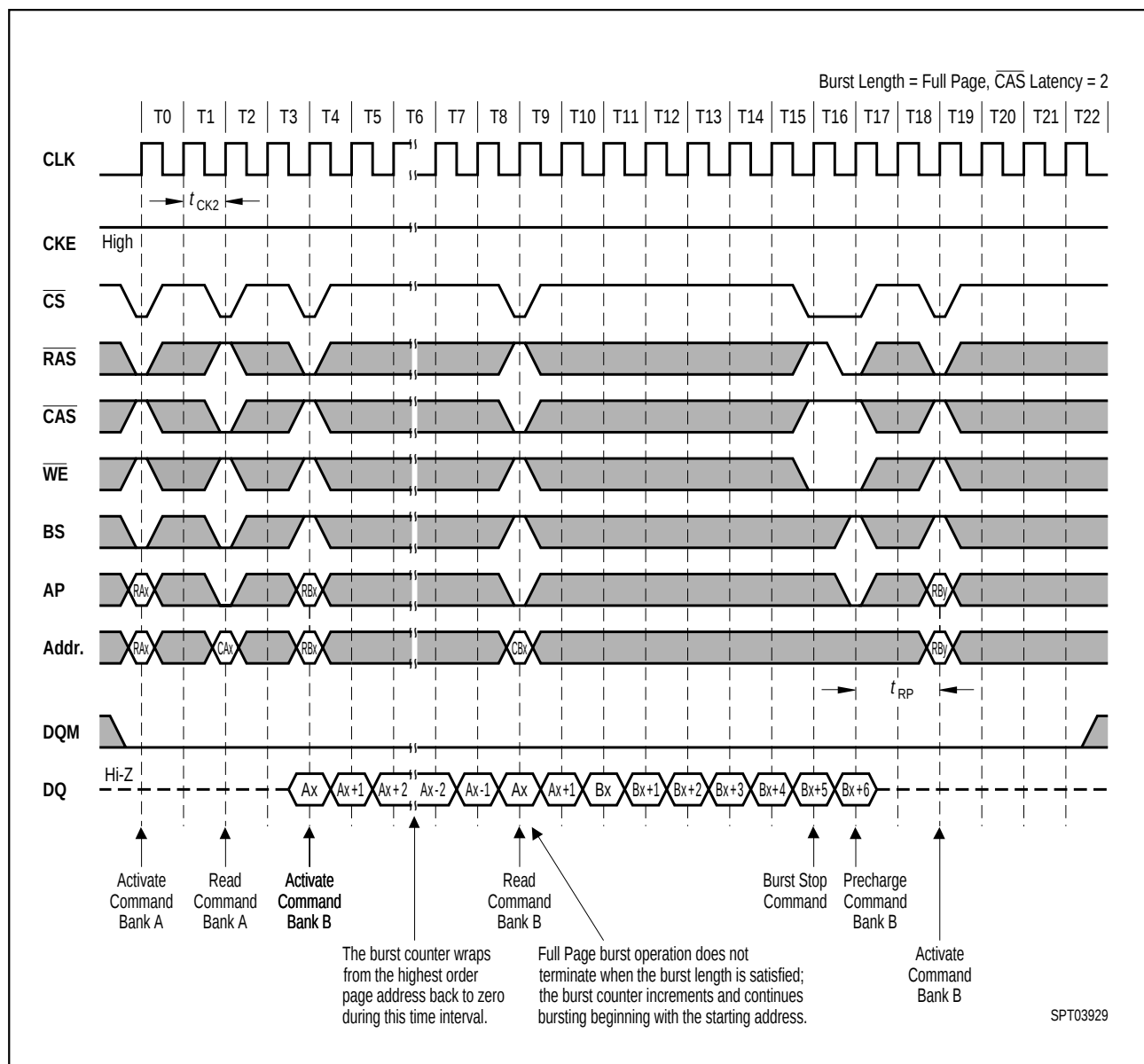


19.2. $\overline{\text{CAS}}$ Latency = 3

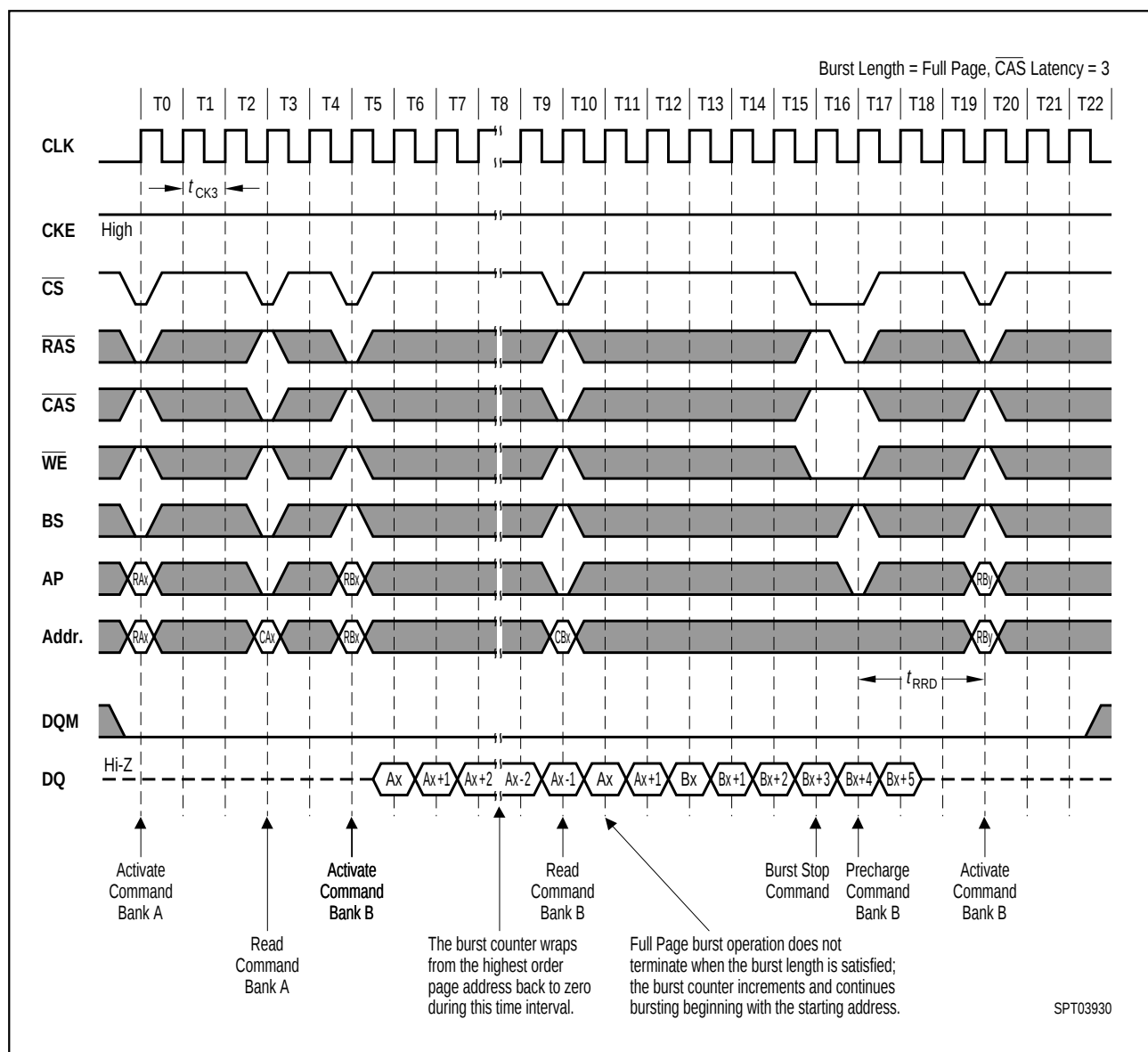


20. Full Page Read Cycle

20.1. $\overline{\text{CAS}}$ Latency = 2

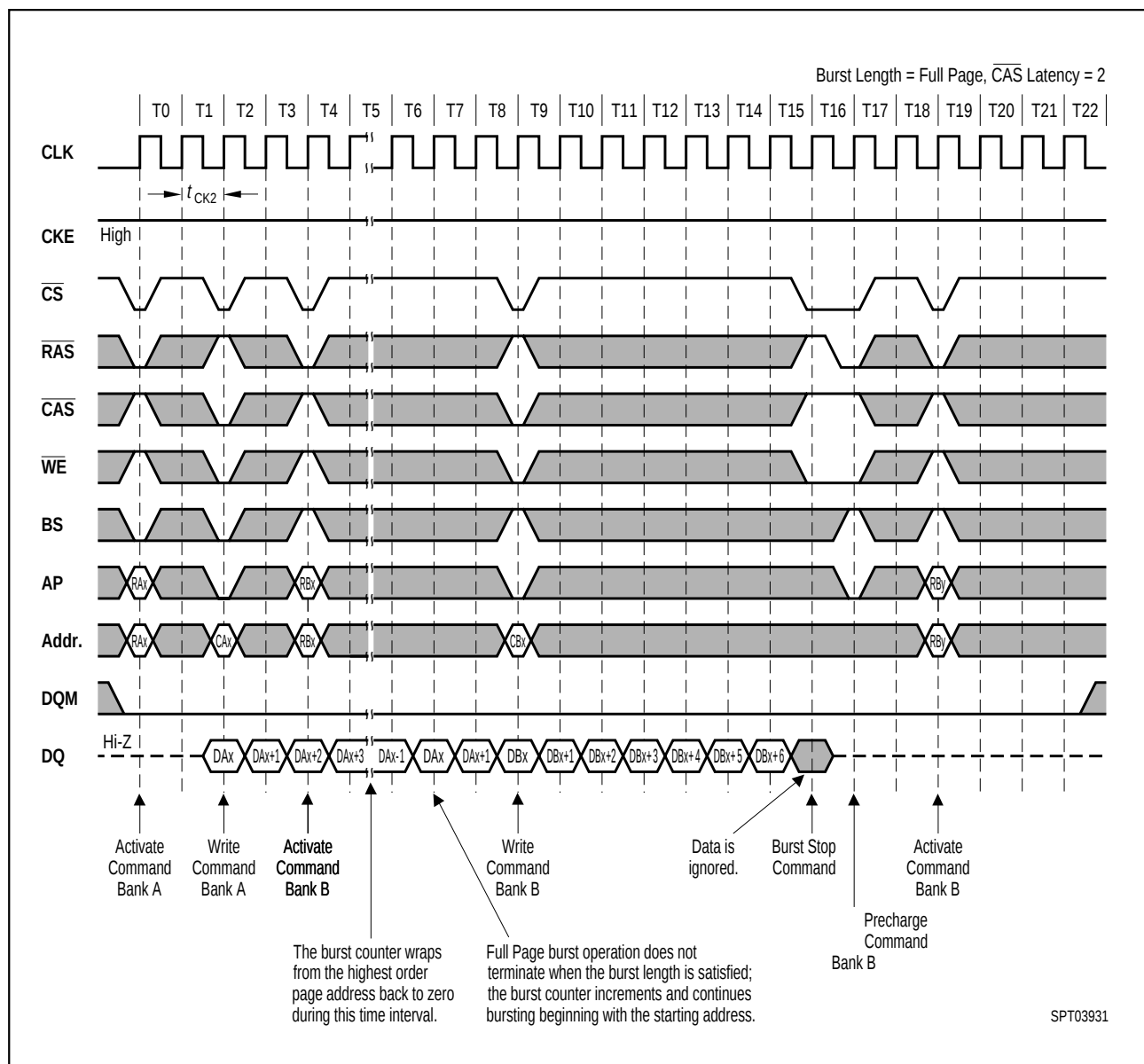


20.2. $\overline{\text{CAS}}$ Latency = 3

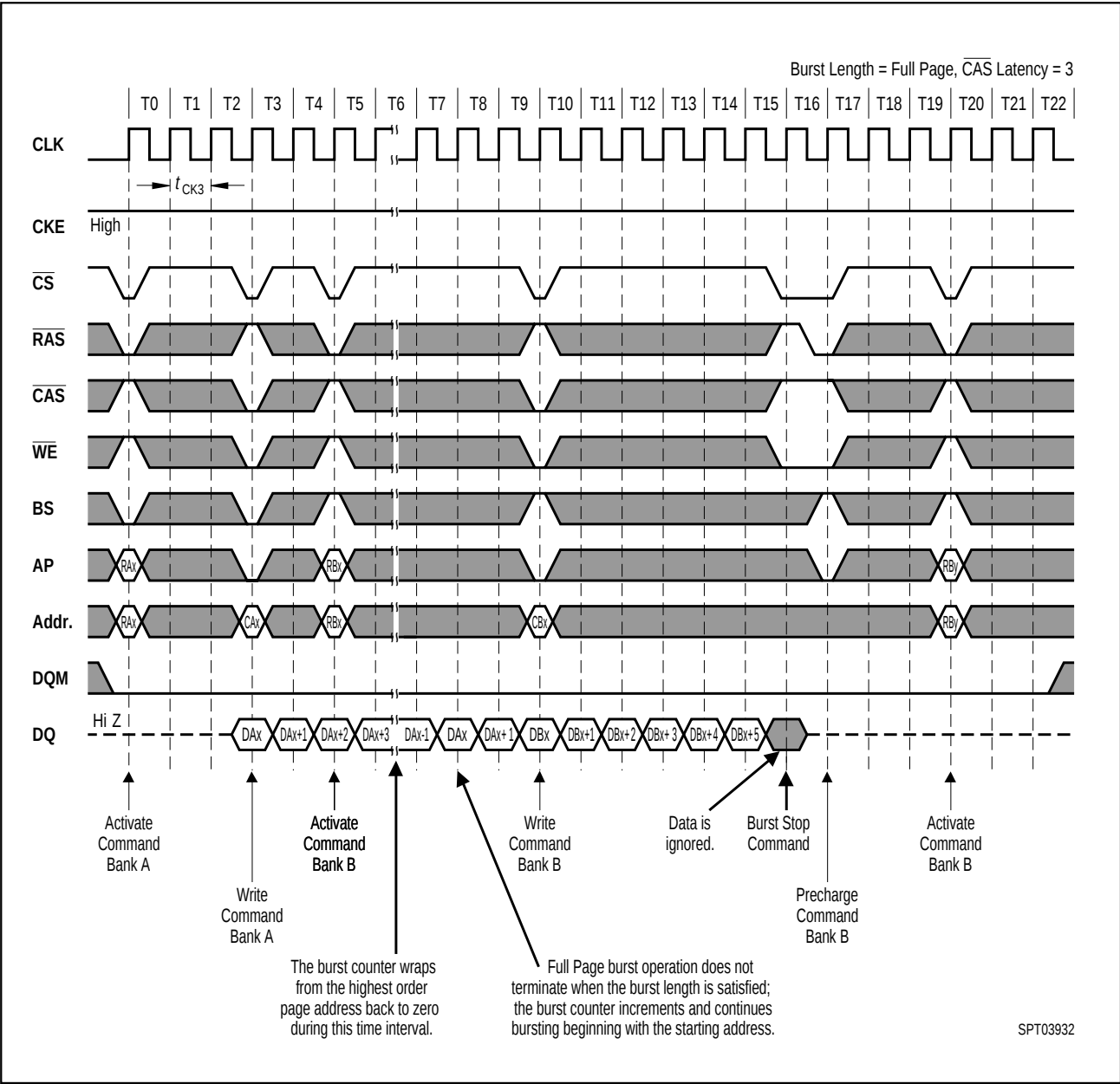


21. Full Page Write Cycle

21.1. $\overline{\text{CAS}}$ Latency = 2



21.2. $\overline{\text{CAS}}$ Latency = 3



22. Precharge Termination of a Burst

22.1. $\overline{\text{CAS}}$ Latency = 2

