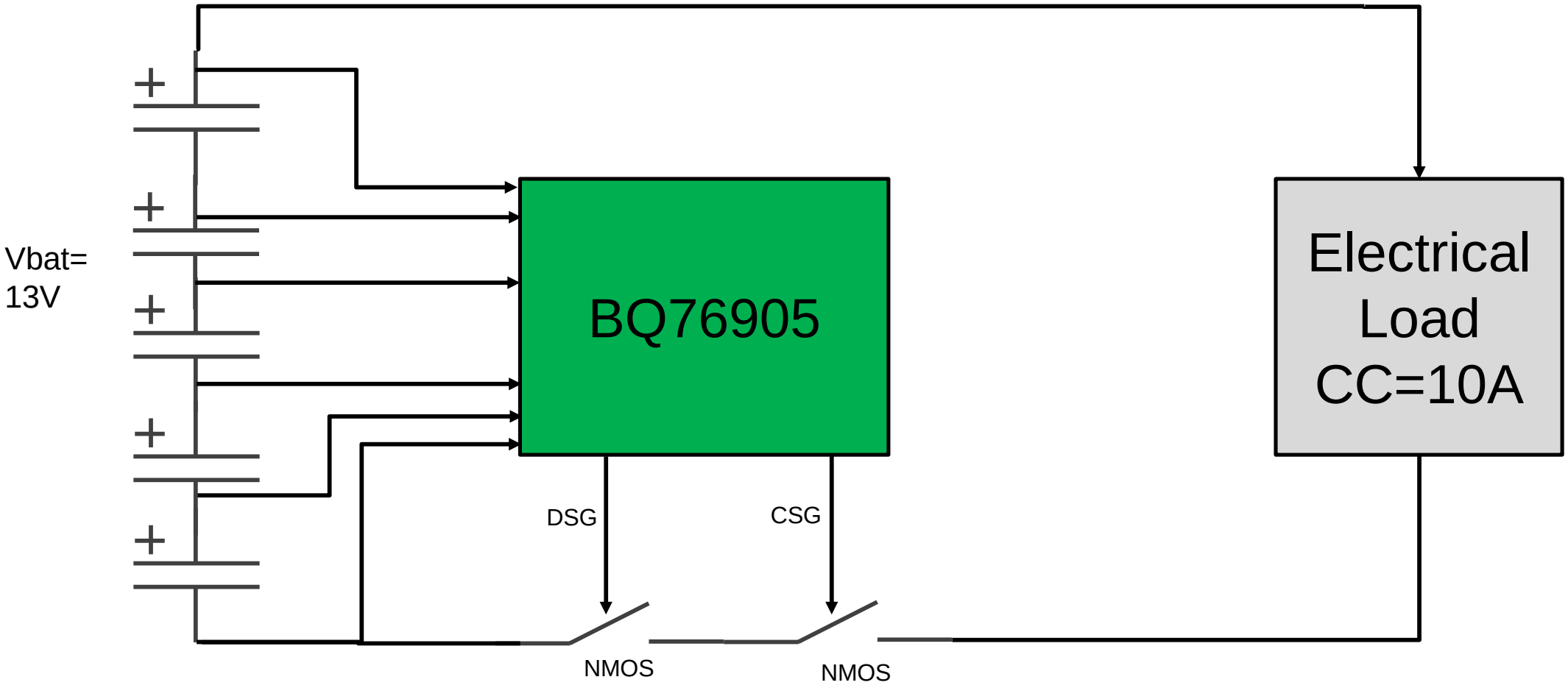
Setup---TI EVM



Vin=13V, Iload=10A, Set higher protection threshold

ta Memory

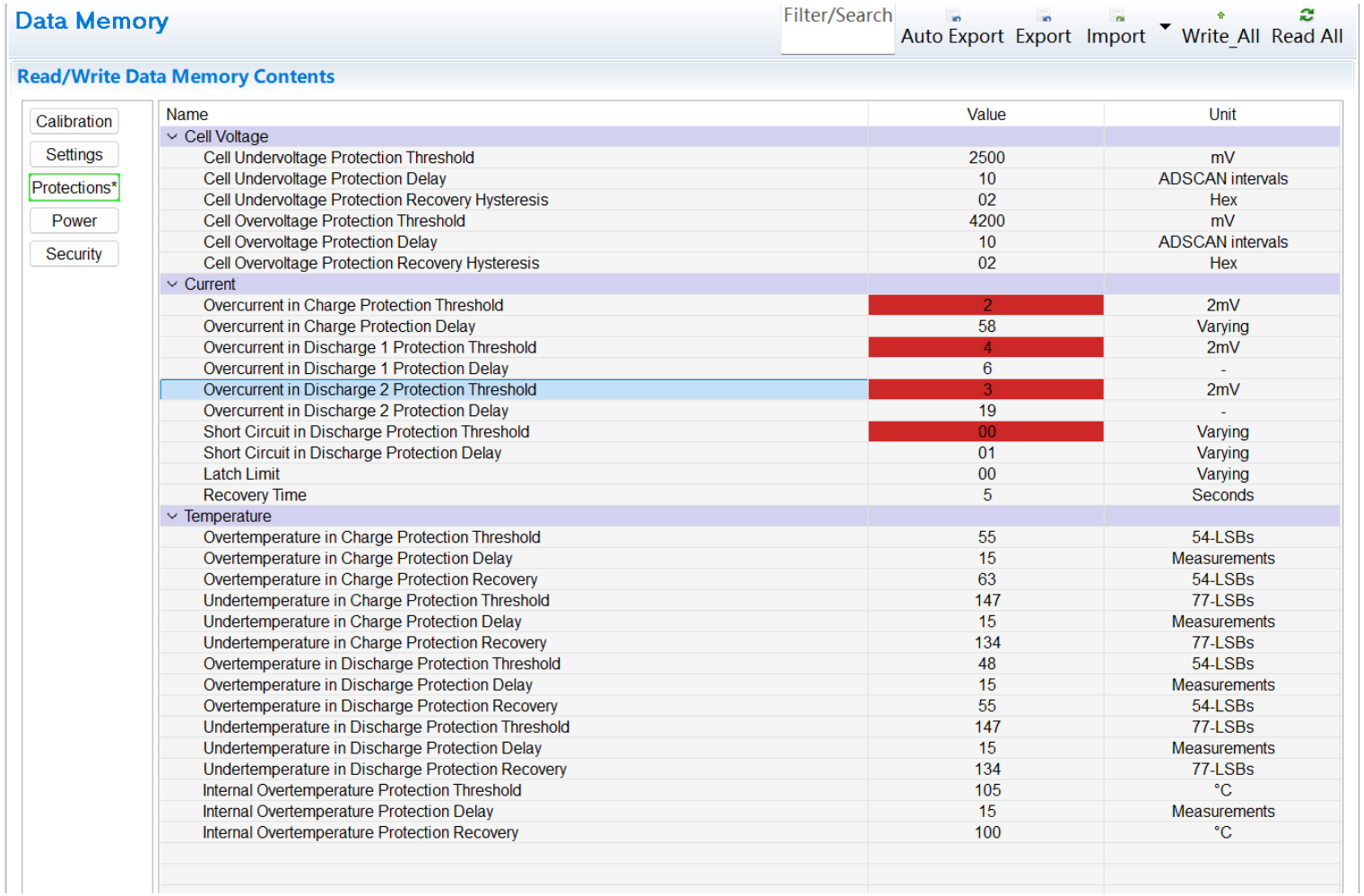
Filter/Search | Auto Export | Export | Import | Write_All | Read All

d/Write Data Memory Contents

alibration
Settings
otections
Power
Security

Name	Value	Unit
Cell Voltage		
Cell Undervoltage Protection Threshold	2500	mV
Cell Undervoltage Protection Delay	10	ADSCAN intervals
Cell Undervoltage Protection Recovery Hysteresis	02	Hex
Cell Overvoltage Protection Threshold	4200	mV
Cell Overvoltage Protection Delay	10	ADSCAN intervals
Cell Overvoltage Protection Recovery Hysteresis	02	Hex
Current		
Overcurrent in Charge Protection Threshold	50	2mV
Overcurrent in Charge Protection Delay	58	Varying
Overcurrent in Discharge 1 Protection Threshold	50	2mV
Overcurrent in Discharge 1 Protection Delay	6	-
Overcurrent in Discharge 2 Protection Threshold	50	2mV
Overcurrent in Discharge 2 Protection Delay	19	-
Short Circuit in Discharge Protection Threshold	0c	Varying
Short Circuit in Discharge Protection Delay	01	Varying
Latch Limit	00	Varying
Recovery Time	5	Seconds
Temperature		
Overtemperature in Charge Protection Threshold	55	54-LSBs
Overtemperature in Charge Protection Delay	15	Measurements
Overtemperature in Charge Protection Recovery	63	54-LSBs
Undertemperature in Charge Protection Threshold	147	77-LSBs
Undertemperature in Charge Protection Delay	15	Measurements
Undertemperature in Charge Protection Recovery	134	77-LSBs
Overtemperature in Discharge Protection Threshold	48	54-LSBs
Overtemperature in Discharge Protection Delay	15	Measurements
Overtemperature in Discharge Protection Recovery	55	54-LSBs
Undertemperature in Discharge Protection Threshold	147	77-LSBs
Undertemperature in Discharge Protection Delay	15	Measurements
Undertemperature in Discharge Protection Recovery	134	77-LSBs
Internal Overtemperature Protection Threshold	105	°C
Internal Overtemperature Protection Delay	15	Measurements
Internal Overtemperature Protection Recovery	100	°C

Vin=13V, Iload=10A, Error



Name	Value	Unit
Cell Voltage		
Cell Undervoltage Protection Threshold	2500	mV
Cell Undervoltage Protection Delay	10	ADSCAN intervals
Cell Undervoltage Protection Recovery Hysteresis	02	Hex
Cell Overvoltage Protection Threshold	4200	mV
Cell Overvoltage Protection Delay	10	ADSCAN intervals
Cell Overvoltage Protection Recovery Hysteresis	02	Hex
Current		
Overcurrent in Charge Protection Threshold	2	2mV
Overcurrent in Charge Protection Delay	58	Varying
Overcurrent in Discharge 1 Protection Threshold	4	2mV
Overcurrent in Discharge 1 Protection Delay	6	-
Overcurrent in Discharge 2 Protection Threshold	3	2mV
Overcurrent in Discharge 2 Protection Delay	19	-
Short Circuit in Discharge Protection Threshold	00	Varying
Short Circuit in Discharge Protection Delay	01	Varying
Latch Limit	00	Varying
Recovery Time	5	Seconds
Temperature		
Overtemperature in Charge Protection Threshold	55	54-LSBs
Overtemperature in Charge Protection Delay	15	Measurements
Overtemperature in Charge Protection Recovery	63	54-LSBs
Undertemperature in Charge Protection Threshold	147	77-LSBs
Undertemperature in Charge Protection Delay	15	Measurements
Undertemperature in Charge Protection Recovery	134	77-LSBs
Overtemperature in Discharge Protection Threshold	48	54-LSBs
Overtemperature in Discharge Protection Delay	15	Measurements
Overtemperature in Discharge Protection Recovery	55	54-LSBs
Undertemperature in Discharge Protection Threshold	147	77-LSBs
Undertemperature in Discharge Protection Delay	15	Measurements
Undertemperature in Discharge Protection Recovery	134	77-LSBs
Internal Overtemperature Protection Threshold	105	°C
Internal Overtemperature Protection Delay	15	Measurements
Internal Overtemperature Protection Recovery	100	°C

After send FET_ENABLE, the fault error happens right now. Read all register to find all registers recover to default value.

Vin=13V, Iload=10A, Fault happens

Bit Registers — Bit High | Bit Low | RSVD

Name	Value	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Safety Alert A	0x00	COV	CUV	SCD	OCD1	OCD2	OCC	RSVD0_1	RSVD0_0
Safety Status A	0x00	COV	CUV	SCD	OCD1	OCD2	OCC	CURLATCH	REGOUT
Safety Alert B	0x00	OTD	OTC	UTD	UTC	OTINT	HWD	VREF	VSS
Safety Status B	0x00	OTD	OTC	UTD	UTC	OTINT	HWD	VREF	VSS
Battery Status (...	0x04C0	**SLEEP**	DEEPSLEEP	SA	SS	SEC_1	SEC_0	RSVD0	**FET_EN**
Battery Statu...		**POR**	**SLEEP_EN**	**CFGUPDATE**	**ALERTPIN**	**CHG**	**DSG**	**CHGDETFLAG**	**RSVD0**
Alarm Status (h...	0x0000	SSA	SSB	SAA	SAB	XCHG	XDSG	SHUTV	CB
Alarm Status (l...		FULLSCAN	ADSCAN	WAKE	SLEEP	TIMER_ALARM	INITCOMP	CDTOGGLE	POR
Alarm Raw Sta...	0x0C03	SSA	SSB	SAA	SAB	**XCHG**	**XDSG**	SHUTV	CB
Alarm Raw Sta...		FULLSCAN	ADSCAN	WAKE	SLEEP	TIMER_ALARM	INITCOMP	CDRAW	**POR**
Alarm Enable (...	0xC200	SSA	SSB	SAA	SAB	XCHG	XDSG	SHUTV	CB
Alarm Enable (l...		FULLSCAN	ADSCAN	WAKE	SLEEP	TIMER_ALARM	INITCOMP	CDTOGGLE	POR
FET CONTROL	0x00	RSVD0_3	RSVD0_2	RSVD0_1	RSVD0_0	CHG_OFF	DSG_OFF	CHG_ON	DSG_ON
REGOUT CON...	0x0E	RSVD0_2	RSVD0_1	RSVD0_0	TS_ON	REG_EN	REGOUTV_2	REGOUTV_1	REGOUTV_0
DSG FET Driv...	0x0000	DSGPWMEN	DSGPWMON_6	DSGPWMON_5	DSGPWMON_4	DSGPWMON_3	DSGPWMON_2	DSGPWMON_1	DSGPWMON_0
DSG FET Driv...		DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...
CHG FET Driv...	0x0000	CHGPWMEN	CHGPWMON_6	CHGPWMON_5	CHGPWMON_4	CHGPWMON_3	CHGPWMON_2	CHGPWMON_1	CHGPWMON_0

Vin=13V, Iload=0.1A, work successfully

Bit Registers — Bit High | Bit Low | RSVD

Name	Value	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Safety Alert A	0x00	COV	CUV	SCD	OCD1	OCD2	OCC	RSVD0_1	RSVD0_0
Safety Status A	0x00	COV	CUV	SCD	OCD1	OCD2	OCC	CURLATCH	REGOUT
Safety Alert B	0x00	OTD	OTC	UTD	UTC	OTINT	HWD	VREF	VSS
Safety Status B	0x00	OTD	OTC	UTD	UTC	OTINT	HWD	VREF	VSS
Battery Status (...	0x854C	SLEEP	DEEPSLEEP	SA	SS	SEC_1	SEC_0	RSVD0	FET_EN
Battery Statu...		**POR**	**SLEEP_EN**	**CFGUPDATE**	**ALERTPIN**	**CHG**	**DSG**	**CHGDETFLAG**	**RSVD0**
Alarm Status (h...	0x0000	SSA	SSB	SAA	SAB	XCHG	XDSG	SHUTV	CB
Alarm Status (l...		FULLSCAN	ADSCAN	WAKE	SLEEP	TIMER_ALARM	INITCOMP	CDTOGGLE	POR
Alarm Raw Sta...	0x0002	SSA	SSB	SAA	SAB	XCHG	XDSG	SHUTV	CB
Alarm Raw Sta...		FULLSCAN	ADSCAN	WAKE	SLEEP	TIMER_ALARM	INITCOMP	CDRAW	POR
Alarm Enable (...	0xC200	SSA	SSB	SAA	SAB	XCHG	XDSG	SHUTV	CB
Alarm Enable (l...		FULLSCAN	ADSCAN	WAKE	SLEEP	TIMER_ALARM	INITCOMP	CDTOGGLE	POR
FET CONTROL	0x00	RSVD0_3	RSVD0_2	RSVD0_1	RSVD0_0	CHG_OFF	DSG_OFF	CHG_ON	DSG_ON
REGOUT CON...	0x0E	RSVD0_2	RSVD0_1	RSVD0_0	TS_ON	REG_EN	REGOUTV_2	REGOUTV_1	REGOUTV_0
DSG FET Driv...	0x0000	DSGPWMEN	DSGPWMON_6	DSGPWMON_5	DSGPWMON_4	DSGPWMON_3	DSGPWMON_2	DSGPWMON_1	DSGPWMON_0
DSG FET Driv...		DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...	DSGPWMOFF...
CHG FET Driv...	0x0000	CHGPWMEN	CHGPWMON_6	CHGPWMON_5	CHGPWMON_4	CHGPWMON_3	CHGPWMON_2	CHGPWMON_1	CHGPWMON_0