Battery Management Studio v1.3.124 (Device - BQ25756) Charger_1_00-bq25756.bqz

File View Window Help

Charger | Advanced Comm | Errors

BQ25756 Default View | BQ25756 Field View

Registers

Save Registers | Load Registers | Start Log | Write Register | Read Register | Auto Read: OFF | Update Mode: Immediate | I2C Address: D4(6A) | Default View | Device ACK OK | Hide Register bit View

8 Bit Registers | 16 Bit Registers

General Single-Bit

☑ EN_TERM	☑ EN_PRECHG	☑ EN_CHG_TMR	☑ EN_TMR2X
☐ WD_RST	☐ DIS_CE_PIN	☑ EN_CHG_BIT_RESET_BEHAVIOR	☐ EN_HIZ
☐ EN_IBAT_LOAD	☑ EN_CHG	☑ EN_ICHG_PIN	☑ EN_ILIM_HIZ_PIN
☐ DIS_PG_PIN	☐ DIS_STAT_PINS	☐ FORCE_STAT4_ON	☐ FORCE_STAT3_ON
☐ FORCE_STAT2_ON	☐ FORCE_STAT1_ON	☐ REG_RST	☐ EN_IAC_LOAD
☑ EN_PFM	☐ EN_REV	☐ FORCE_SWEEP	☐ EN_MPPT
☑ JEITA_ISETH	☑ EN_JEITA	☑ EN_TS	☐ BCOLD
☐ SYSREV_UV	☐ ADC_EN	☑ ADC_RATE	☐ ADC_AVG
☐ ADC_AVG_INIT	☐ IAC_ADC_DIS	☐ IBAT_ADC_DIS	☐ VAC_ADC_DIS
☐ VBAT_ADC_DIS	☐ TS_ADC_DIS	☑ VFB_ADC_DIS	

General Multi-Bit

VBAT_LOWV	71.4% x VFB_REG	TOPOFF_TMR	Disable
WATCHDOG	Disable	CHG_TMR	12hr
CV_TMR	disable	VRECHG	97.6% x VFB_REG
P_AND_O_TMR	0.5s	FULL_SWEEP_TMR	3 min
TS_T5	34.375% (60C)	TS_T3	44.8% (45C)
TS_T2	68.4% (10C)	TS_T1	73.25% (0C)
JEITA_VSET	97.6% x VFB_REG	JEITA_ISETC	20% x ICHG_REG
BHOT	34.2% (60C)	ADC_SAMPLE	13 bit effective resolution

Status

ADC_DONE_STAT	Conversion not complete	IAC_DPM_STAT	Normal
VAC_DPM_STAT	Normal	WD_STAT	WD timer expired
CHARGE_STAT	Charge Termination Done	PG_STAT	Power Good
TS_STAT	Normal	MPPT_STAT	MPPT Disabled
FSW_SYNC_STAT	Normal, no external clock detected	CV_TMR_STAT	Normal
REVERSE_STAT	Reverse Mode off	VAC_UV_STAT	Input Normal
VAC_OV_STAT	Input Normal	IBAT_OCP_STAT	Battery current normal
VBAT_OV_STAT	Normal	TSHUT_STAT	Normal
CHG_TMR_STAT	Normal	DRV_OKZ_STAT	Normal

Flag

ADC_DONE_FLAG	Conversion not complete	IAC_DPM_FLAG	Device entered Input Current regulation
VAC_DPM_FLAG	Normal	WD_FLAG	WD_STAT rising edge detected
CV_TMR_FLAG	Normal	CHARGE_FLAG	CHARGE_STAT[2:0] bits changed (transition to any state)

A	7	6	5	4	3	2	1	0	D	W	R
14	0	0	0	0	1	1	1	1	0F	W	R
15	0	0	0	0	1	1	0	1	0D	W	R
16	0	0	0	0	0	0	0	0	00	W	R
17	1	1	0	0	1	0	0	1	C9	W	R
18	1	1	0	0	0	0	0	0	C0	W	R
19	0	0	1	0	0	0	0	0	20	W	R
1A	0	0	1	0	0	0	0	0	20	W	R
1B	1	0	0	1	0	1	1	0	96	W	R
1...	0	1	0	1	0	1	1	1	57	W	R
1...	0	1	0	0	0	0	0	0	40	W	R
1E	0	0	0	0	0	0	0	0	00	W	R
21	0	0	0	0	1	1	1	1	0F	W	R
22	1	0	0	0	0	0	0	0	80	W	R
23	0	0	0	0	0	0	0	0	00	W	R
24	0	0	0	0	0	0	0	0	00	W	R
25	0	1	0	0	1	0	0	1	49	W	R
26	1	0	0	0	0	0	0	0	80	W	R
27	0	0	0	0	0	0	1	0	02	W	R
28	0	0	0	0	0	0	0	0	00	W	R
29	0	0	0	0	0	0	0	0	00	W	R
2A	0	0	0	0	0	0	0	0	00	W	R
2B	0	1	1	0	0	0	0	0	60	W	R
2...	0	0	0	0	1	0	1	0	0A	W	R
3B	0	0	0	0	0	0	0	0	00	W	R
3...	0	0	0	0	0	0	0	0	00	W	R
3...	0	0	1	1	0	0	1	0	32	W	R
62	0	0	0	0	0	0	1	0	02	W	R

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VAC_DPM_STAT	Normal	WD_STAT	WD timer expired
CHARGE_STAT	Charge Termination Done	PG_STAT	Power Good
TS_STAT	Normal	MPPT_STAT	MPPT Disabled
FSW_SYNC_STAT	Normal, no external clock detected	CV_TMR_STAT	Normal
REVERSE_STAT	Reverse Mode off	VAC_UV_STAT	Input Normal
VAC_OV_STAT	Input Normal	IBAT_OCP_STAT	Battery current normal
VBAT_OV_STAT	Normal	TSHUT_STAT	Normal
CHG_TMR_STAT	Normal	DRV_OKZ_STAT	Normal

Flag

ADC_DONE_FLAG	Conversion not complete	IAC_DPM_FLAG	Device entered Input Current regulation
VAC_DPM_FLAG	Normal	WD_FLAG	WD_STAT rising edge detected
CV_TMR_FLAG	Normal	CHARGE_FLAG	CHARGE_STAT[2:0] bits changed (transition to any state)
PG_FLAG	PG signal toggle detected	TS_FLAG	Normal
REVERSE_FLAG	Normal	FSW_SYNC_FLAG	Normal
MPPT_FLAG	Normal	VAC_UV_FLAG	Normal
VAC_OV_FLAG	Normal	IBAT_OCP_FLAG	Normal
VBAT_OV_FLAG	Normal	TSHUT_FLAG	Normal
CHG_TMR_FLAG	Normal	DRV_OKZ_FLAG	DRV_SUP pin fault detected

Mask

☐ ADC_DONE_MASK	☐ IAC_DPM_MASK	☐ VAC_DPM_MASK	☐ WD_MASK
☐ CV_TMR_MASK	☐ CHARGE_MASK	☐ PG_MASK	☐ ACFET_MASK
☐ BATFET_MASK	☐ TS_MASK	☐ REVERSE_MASK	☐ FSW_SYNC_MASK
☐ MPPT_MASK	☐ VAC_UV_MASK	☐ VAC_OV_MASK	☐ IBAT_OCP_MASK
☐ VBAT_OV_MASK	☐ TSHUT_MASK	☐ CHG_TMR_MASK	☐ DRV_OKZ_MASK

Reverse Mode Battery Discharge Current

IBAT_REV: 20A ☑ EN_CONV_FAST_TRANSIENT

Gate Driver Strength and Dead Time

BOOST_HS_DRV	Fastest	BUCK_HS_DRV	Fastest
BOOST_LS_DRV	Fastest	BUCK_LS_DRV	Fastest
BOOST_DEAD_TIME	45ns	BUCK_DEAD_TIME	45ns

Part Information

PART_NUM | DEV_REV

A	7	6	5	4	3	2	1	0	D	W	R
14	0	0	0	0	1	1	1	1	0F	W	R
15	0	1	0	0	1	1	0	1	4D	W	R
16	0	0	0	0	0	0	0	0	00	W	R
17	1	1	0	0	1	0	0	1	C9	W	R
18	1	1	0	0	0	0	0	0	C0	W	R
19	0	0	1	0	0	0	0	0	20	W	R
1A	0	0	1	0	0	0	0	0	20	W	R
1B	1	0	0	1	0	1	1	0	96	W	R
1...	0	1	0	1	0	1	1	1	57	W	R
1...	0	1	0	0	0	0	0	0	40	W	R
1E	0	0	0	0	0	0	0	0	00	W	R
21	0	0	0	0	1	1	1	1	0F	W	R
22	1	0	0	0	0	0	0	0	80	W	R
23	0	0	0	0	0	0	0	0	00	W	R
24	0	0	0	0	0	0	0	0	00	W	R
25	0	1	0	0	1	0	0	1	49	W	R
26	1	0	0	0	0	0	0	0	80	W	R
27	0	0	0	0	0	0	1	0	02	W	R
28	0	0	0	0	0	0	0	0	00	W	R
29	0	0	0	0	0	0	0	0	00	W	R
2A	0	0	0	0	0	0	0	0	00	W	R
2B	0	1	1	0	0	0	0	0	60	W	R
2...	0	0	0	0	1	0	1	0	0A	W	R
3B	0	0	0	0	0	0	0	0	00	W	R
3...	0	0	0	0	0	0	0	0	00	W	R
3...	0	0	1	1	0	0	1	0	32	W	R
62	0	0	0	0	0	0	1	0	02	W	R

Texas Instruments

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General Multi-Bit

VFB_REG	1536 mV	ICHG_REG	2000 mA
IAC_DPM	2000 mA	VAC_DPM	4200 mV
IAC_REV	50000 mA	VSYS_REV	5000 mV
IPRECHG	4000 mA	ITERM	2000 mA
VAC_MPP	0 mV		

ADC Result

IAC_ADC - Use Field View	0 mA	IBAT_ADC - Use Field View	0 mA
VAC_ADC	0 mV	VBAT_ADC	0 mV
TS_ADC	0.0000 %	VFB_ADC	0 mV

A	1..	1..	1..	1..	1..	1..	9	8	7	6	5	4	3	2	1	0	D	W	R
00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	10	W	R
02	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	A0	W	R
04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	W	R
06	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	40	W	R
08	0	0	0	0	0	0	1	1	0	1	0	0	1	0	0	0	348	W	R
0A	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	640	W	R
0...	0	0	0	0	0	0	1	1	1	1	1	0	1	0	0	0	3E8	W	R
10	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	140	W	R
12	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	A0	W	R
1F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	W	R
2...	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	W	R
2F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	W	R
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	W	R
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	W	R
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	W	R
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	W	R

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