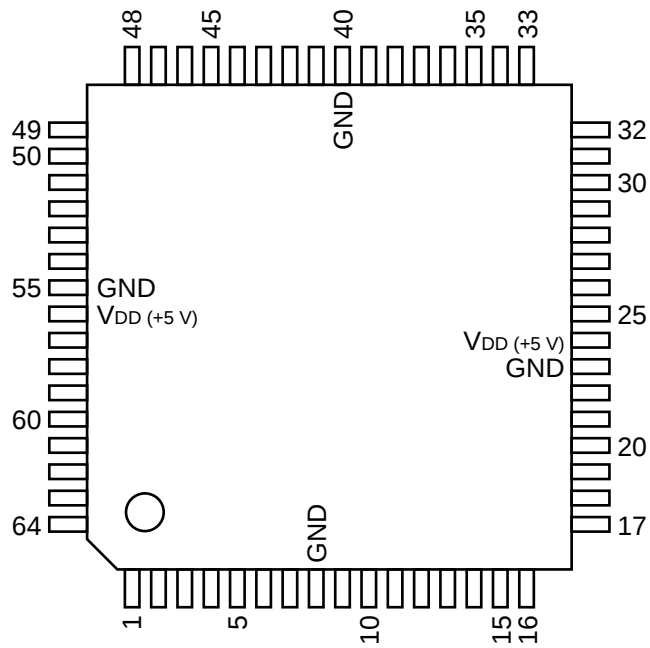


C-MOS TIMING GENERATOR FOR PROGRESSIVE SCAN
READOUT SYSTEM CCD IMAGE SENSOR
- TOP VIEW -



(V_{DD} = +5 V)

PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL
1	O	OSCO	14	O	XH2	27	O	XSG	40	—	GND	53	O	FLD
2	I	OSCI	15	O	XHHG1A	28	O	XSHP	41	I	RDM	54	O	BLK
3	I	PS	16	O	XHHG1B	29	O	XSHD	42	I	RM	55	—	GND
4	I	ED0	17	O	XHHG2	30	O	XRS	43	O	XCPDM	56	—	V _{DD}
5	I	ED1	18	O	XVOG	31	O	TEST3	44	O	XCPOB	57	O	SYNC
6	I	ED2	19	O	XVHOLD	32	O	TEST4	45	O	PBLK	58	I	HDI
7	I	SMD1	20	O	TEST1	33	I	TEST5	46	O	ID	59	I	VDI
8	—	GND	21	O	TEST2	34	I	TEST6	47	O	WEN	60	O	HDO
9	I	SMD2	22	O	XV3	35	I	TEST7	48	I	TEST8	61	O	VDO
10	I	TRIG	23	—	GND	36	I	EXT	49	O	CL	62	I	HRI
11	O	RG	24	—	V _{DD}	37	I	REND	50	O	CLD	63	I	VRI
12	O	XSUB	25	O	XV2	38	I	REXH	51	O	O2FH	64	I	CKI
13	O	XH1	26	O	XV1	39	I	OCTL	52	O	CLQ			

58	HDI	XCPDM	43
59	VDI	XCPOB	44
36	EXT	PBLK	45
37	REND	ID	46
38	REVB	WEN	47
39	OCTL		12
41	RDM	XSUB	
42	RM	CLD	50
3	PS	O2FH	51
4	ED0	CLQ	52
5	ED1	FLD	53
6	ED2	BLK	54
7	SMD1	SYNC	57
9	SMD2	HDO	60
		VDO	61
62	HRI		11
63	VRI	RG	13
		XH1	14
64	CKI	XH2	28
10	TRIG	XSHP	29
2	OSCI	XSHD	30
1	OSCO	XRS	26
		XV1	25
		XV2	22
		XV3	27
		XSG	15
		XHHG1A	16
		VHHG1B	17
		XHHG2	18
		XVOG	19
		XVHOLD	
		CL	49
33	TEST5	TEST1	20
34	TEST6	TEST2	21
35	TEST7	TEST3	31
48	TEST8	TEST4	32

INPUT

CKI	; 2f _{ck} CLOCK
ED0 - ED2	; SHUTTER SPEED SETTING
EXT	; INTERNAL/EXTERNAL SYNC SWITCH
HDI	; HORIZONTAL SYNC
HRI	; HORIZONTAL SYNC RESET
OCTL	; CLQ/O2FH OUTPUT CONTROL
OSCI	; OSCILLATOR INVERTER
PS	; ELECTRON SHUTTER SPEED INPUT SWITCH
RDM	; NORMAL ACTIVE/RANDOM TRIGGER SHUTTER SWITCH
REND	; NORMAL/DIRECT RESET SWITCH
REVB	; V/HV RESET SWITCH
RM	; OUTPUT MODE SWITCH
SMD1, SMD2	; SHUTTER MODE SETTING
TEST5 - TEST8	; TEST
TRIG	; TRIGGER (RANDOM TRIGGER SHUTTER)
VDI	; VERTICAL SYNC
VRI	; VERTICAL SYNC RESET

OUTPUT

BLK	; COMPOSITE BLANKING
CL	; f _{ck} CLOCK (0°)
CLD	; f _{ck} CLOCK (180°)
CLQ	; f _{ck} /4 CLOCK
FLD	; FIELD PULSE
HDO	; HORIZONTAL SYNC
ID	; LINE DETECT
O2FH	; 2f _{ck} CLOCK
OSCO	; OSCILLATOR INVERTER
PBLK	; BLANKING CLEANING PULSE
RG	; RESET GATE PULSE
SYNC	; COMPOSITE SYNC
TEST1 - TEST4	; TEST
VDO	; VERTICAL SYNC
WEN	; WRITE ENABLE
XCPDM	; CLAMP PULSE
XCPOB	; CLAMP PULSE
XH1, XH2	; DRIVE CLOCK (CCD HORIZONTAL REGISTER)
XHHG1A, XHHG1B	; TRANSCEIVE CLOCK (CCD HORIZONTAL REGISTER DURING)
XHHG2	; TRANSCEIVE CLOCK (CCD HORIZONTAL REGISTER DURING)
XRS	; SAMPLE HOLD PULSE
XSG	; CCD SENSOR ELECTRIC READ OUT PULSE
XSHD	; DATA SAMPLE HOLD PULSE
XSHP	; SAMPLE HOLD PULSE (PRE-CHARGE LEVEL)
XSUB	; CCD ELECTRIC SWEEP THROW AWAY
XV1 - XV3	; DRIVE CLOCK (CCD VERTICAL REGISTER)
XVHOLD	; ADJUST CLOCK (CCD HORIZONTAL REGISTER TRANSCEIVE TIMMING)
XVOG	; TRANSCEIVE CLOCK (CCD VERTICAL REGISTER → CCD HORIZONTAL REGISTER)

