

# OKI electronic components

## KGL6050

### Ultra high-speed logic IC T-Flip Flop

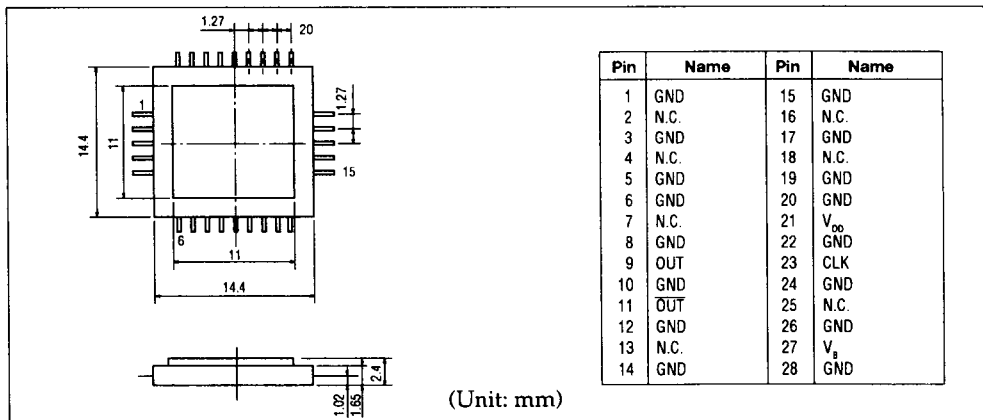
#### GENERAL DESCRIPTION

The KGL6000 family are the ultra high-speed GaAs devices. With our unique MCFF (memory cell type flip-flop) technology, ultra high-speed operation of 5 GHz or more has been realized. Built-in DCFL interface buffer circuit allows for easier connection between family ICs. Ideal for optical communication systems and high-speed measuring instruments.

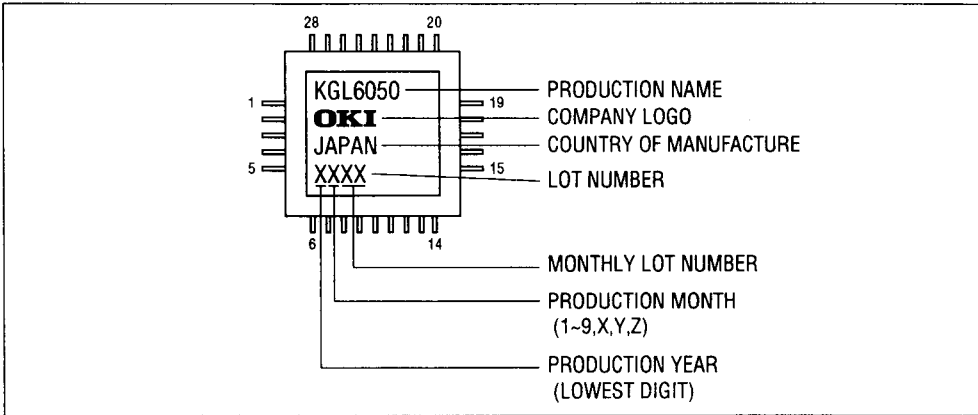
#### FEATURES

- Ultra high-speed logic IC family  
This logic IC family operates at 5 GHz or more by unique memory cell type flip-flop (MCFF) technology. Ideal for optical communication systems and high-performance measuring instruments.
- Ultra high-speed operation: 5 GHz (input clock frequency)
- Single power supply voltage: 2 V ( $V_{DD}$ ,  $V_B$ )
- Output level is variable by  $V_B$
- High-speed rise and fall time: 60 ps (typical)
- Serial data input and output high-speed T flip-flop
- Low-current consumption: 100 mA (typical,  $V_B$ )
- I/O terminals for 50  $\Omega$  connection
- Complementary output
- 28-pin flat package

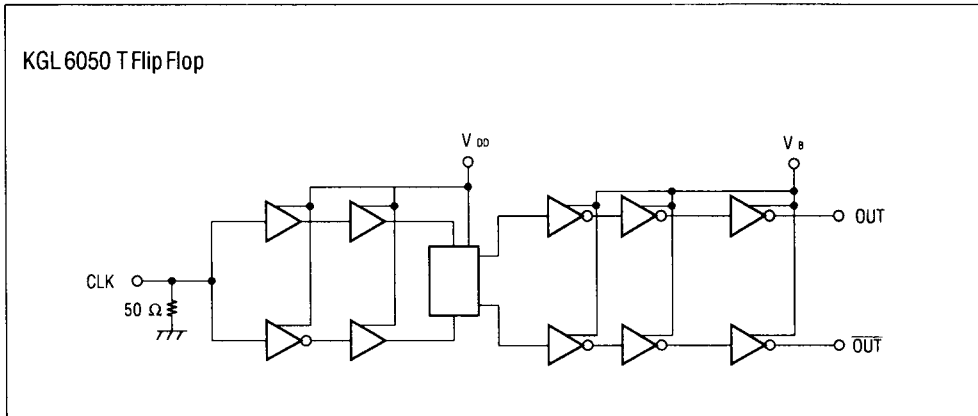
#### OUTLINE DIMENSIONS



MARKING



BLOCK DIAGRAM



**ABSOLUTE MAXIMUM RATINGS**

Item	Symbol	Unit	Min.	Max.
Power supply voltage	$V_{DD}, V_B$	V	0	3
Input terminal applied voltage	—	V	-1.0	1.5
Output terminal applied voltage	—	V	-1.0	3.0
Storage temperature	Tstg	°C	-55	125
Case temperature under bias	—	°C	-45	125

**ELECTRICAL CHARACTERISTICS**

Item	Symbol	Condition	Unit	Min.	Typ.
Input frequency (clock)	f max	—	GHz	5	—
Input voltage High	$V_{IH}$	—	V	—	0.8
Input voltage Low	$V_{IL}$	—	V	—	0.1
Output voltage High	$V_{OH}$	Level is variable by $V_B$	V	—	0.9
Output voltage Low	$V_{OL}$	Level is variable by $V_B$	V	—	0.1
Power source current at $V_{DD}$	$I_{DD}$	Power supply for logic circuit	mA	—	50
Power source current at $V_B$	$I_B$	Power supply for output buffer	mA	—	100