

OKI electronic components

KGL6020

Ultra high-speed logic IC OR/NOR gate

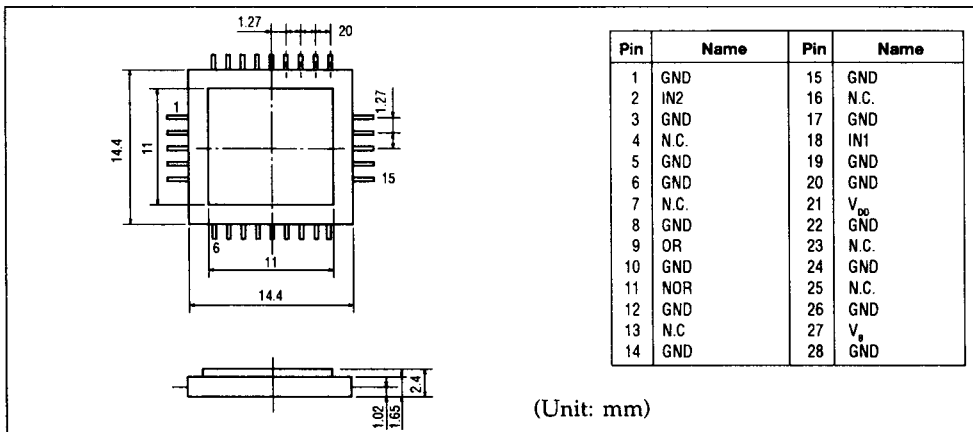
GENERAL DESCRIPTION

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 connections between family ICs. Ideal for optical communication system and high-speed measuring instruments.

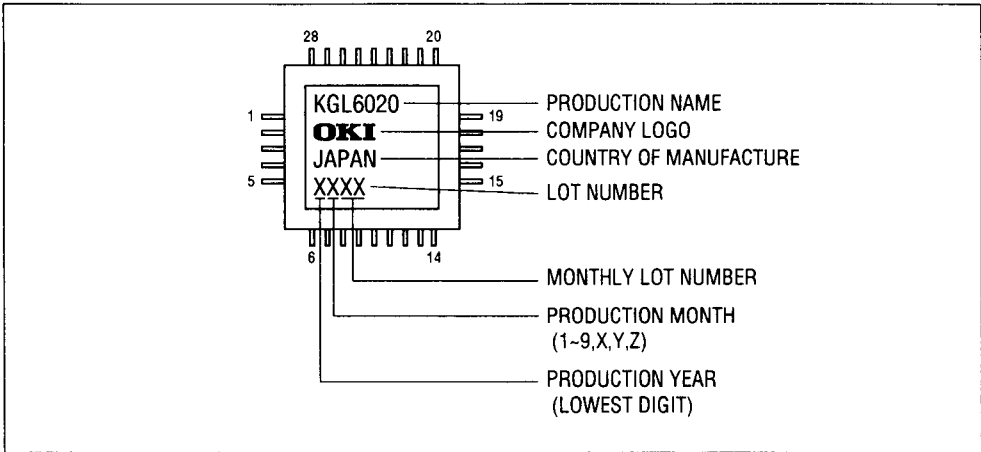
FEATURES

- Ultra high-speed logic IC family
This logic IC family operates at 5 GHz or more by using a unique memory cell type flip-flop (MCFF) technology ideal for optical communication systems and high-performance measuring instruments.
- Ultra high-speed operation: 5 Gbps (min. NRZ)
- Single power supply voltage: 2 V (V_{DD}, V_B)
- Output level is variable by V_B
- High-speed rise and fall time: 60ps (typical)
- Low-current consumption: 100 mA (typical, V_B)
- I/O terminals for 50 Ω connection
- Complementary outputs
- 28-pin flat package

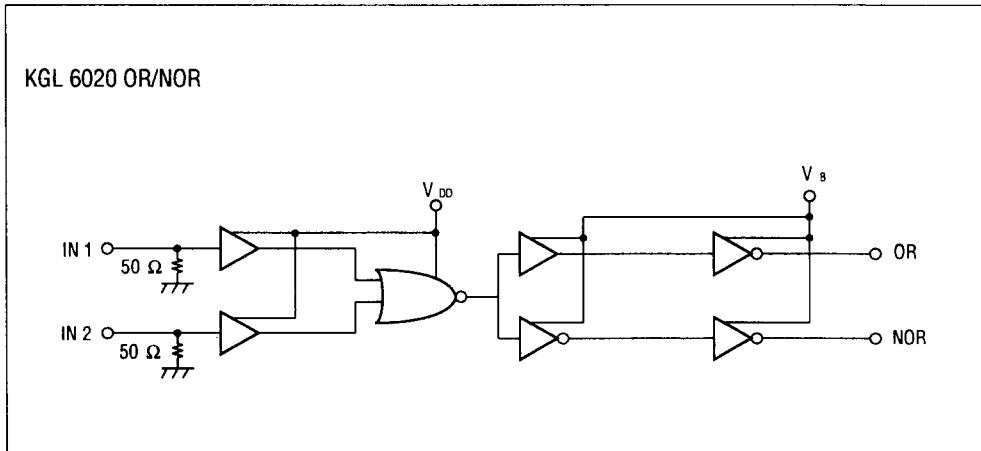
OUTLINE DIMENSIONS



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.
Max. data rate	f max	—	Gbps	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	—	30
Power source current at V_B	I_B	Power supply for output buffer	mA	—	100