



OR CERN N 4132

Purpose

Outputs are produced if any number out of the six inputs is present.

General Features

The Or, which is built in a single-width NIM-module, is entirely DC-coupled.

Each of the four logic outputs and the complementary output has its own output transistor. This gives good decoupling between the outputs, and the unused outputs need not be terminated.

SPECIFICATIONS

INPUT

Number	6
Resistance	50 ohms \pm 2%
Reflections	\leq 12.5% for a step with $t_r = 1.0$ ns. Capacitive.
Voltage	Typically - 800 mV, (logical "1"), $t_r = t_f \leq 2,5$ ns Threshold \geq - 200 mV, for which output \leq 100 mV (output "0") Minimum to produce minimum logical "1" (= - 14 mA at output) \geq - 550 mV DC
Width	Shortest pulse to produce full output ≥ 2.5 ns at 600 mV level of a - 800 mV pulse Maximum = DC
Maximum Rate	≥ 150 Mc/s

OUTPUT

Number	4 logic 1 complementary (NOR)
Impedance	High, current source. Unused outputs need not be terminated.
Rise and Fall Time	Logic $t_r \leq 2,0$ ns $t_f \leq 2,2$ ns Complementary $t_r \leq 2,2$ ns $t_f \leq 2,2$ ns
Overshoot	$\leq 15\%$ for logic
Undershoot	$\leq 18\%$ for complementary
Width	Equal to width (F.W.H.M.) of input signal $\pm 0,7$ ns. Temperature coefficient $\leq + 30$ ps/ $^{\circ}$ C, for input with $t_r = t_f \leq 2,0$ ns
Maximum Rate	Equal to maximum input rate ≥ 150 Mc/s
Propagation Delay	6,5 ns \pm 0,75 ns (measured at min "1" level)

POWER CONSUMPTION	- 24 V.	≤ 170 mA.
	+ 24 V.	≤ 50 mA.

N.B. Rise times (t_r) and fall times (t_f) are 10-90% values.