6 Lake Street, Lawrence, MA 01841
1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803
Website: http: //www.microsemi.com

TECHNICAL DATA SHEET

ISOLATED DIODE ARRAY

Qualified per MIL-PRF-19500/474

APPLICATIONS / BENEFITS

- High Frequency Data Lines
- RS-232 & RS-422 Interface Networks
- Ethernet: 10 Base T
- Computer I/O Ports
- LAN
- Switching Core Drivers
- IEC 61000-4 Compatible (see circuit in figure 1)

  61000-4-2 ESD : Air 15kV, contact 8kW
  61000-4-4 (EFT) : 40A – 5/50 ns
  61000-4-5 (surge): 12A 8/20 μs

MAXIMUM RATINGS

- Reverse Breakdown Voltage 75 V (Notes 1 & 2)
- Continuous Forward Current 300 mA dc (Notes 1 & 3)
- Peak Surge Current (tp=1/120 s) of 500 mA dc (Note 1)
- 400 mW Power Dissipation per Junction @ 25°C
- 600 mW Power Dissipation per Package @ 25°C (Note 4)
- Operating Junction Temperature range –65° to +150°C
- Storage Temperature range of –65° to +200°C

  NOTE 1: Each Diode
  NOTE 2: Pulsed: P_W = 100 ms max; duty cycle ≤ 20%
  NOTE 3: Derate at 2.4 mA/°C above +25°C
  NOTE 4: Derate at 4.8 mW/°C above +25°C

MECHANICAL AND PACKAGING

- 16-PIN Ceramic DIP
- Weight 2.09 grams (approximate)
- Marking: Logo, part number, date code
- Pin #1 to the left of the indent on top of package
- Carrier Tubes; 25 pcs (standard)

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ELECTRICAL CHARACTERISTICS (Per Diode) @ 25°C unless otherwise specified							
PART NUMBER	MAXIMUM FORWARD VOLTAGE V_{F1} I_F = 100 mA (Note 1)	MAXIMUM REVERSE CURRENT I_{R1} V_R = 40 V	MAXIMUM REVERSE CURRENT I_{R2} V_R = 20 V	MAXIMUM CAPACITANCE (PIN TO PIN) C_t V_R = 0 V F = 1 MHz	MAXIMUM FORWARD RECOVERY TIME t_{fr} I_F = 100 mA	MAXIMUM REVERSE RECOVERY TIME trr I_F = I_R = 10 mAdc i_{rr} = 1 mAdc R_L = 100 ohms	MAXIMUMF ORWARD VOLTAGE MATCH V_{F5} I_F = 10 mA
	V	µA	nA	pF	ns	ns	mV
1N6101	1	0.1	25	4.0	15	10	5

NOTE 1: Pulsed: P_W = 300 µs +/- 50 µs, duty cycle ≤ 2%, 90 µs after leading edge.

SYMBOLS & DEFINITIONS	
Symbol	**DEFINITION**
V_{BR}	Minimum Breakdown Voltage: The minimum voltage the device will exhibit at a specified current.
V_F	Maximum Forward Voltage: The maximum forward voltage the device will exhibit at a specified current.
I_R	Maximum Leakage Current: The maximum leakage current that will flow at the specified voltage and temperature.
C_t	Capacitance: The capacitance of the diode as defined @ 0 volts at a frequency of 1 MHz and stated in picofarads.

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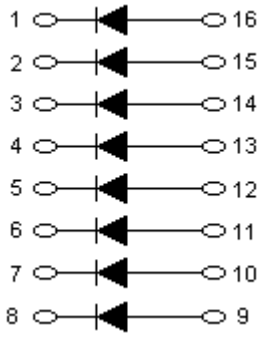
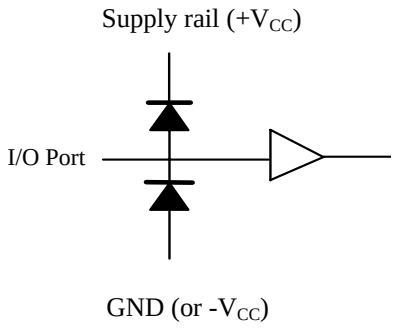
SCHEMATIC



CIRCUIT



STEERING DIODE APPLICATION

FIGURE 1

PACKAGE DIMENSIONS