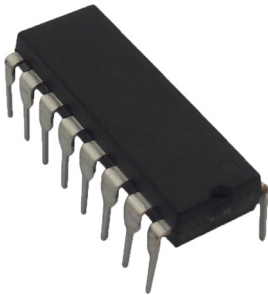


## Binary Synchronous Counter, 44MHz, 2V to 6V, DIP-16

**RoHS  
Compliant**



29AH7536

### Features

- Internal look-ahead for fast counting
- Carry output for n-bit cascading
- Synchronous counting
- Synchronously programmable
- Outputs can drive up to 10 LSTTL loads
- 80µA Maximum low power consumption
- 14ns Typical tpd
- ±4mA Output drive at 5V
- 1µA Maximum low input current

### Specifications

Logic Family / Base Number	: 74HC163
Counter Type	: Binary
Clock Frequency	: 44MHz
Count Maximum	: 15
Logic Case Style	: DIP
No. of Pins	: 16Pins
Supply Voltage	: 2V to 6V
Logic IC Family	: 74HC
Logic IC Base Number	: 74163
Operating Temperature	: -40°C to +85°C

## Standard Recovery Diode, 1kV, 1A, Single, 1.35V, 30A



42K2831

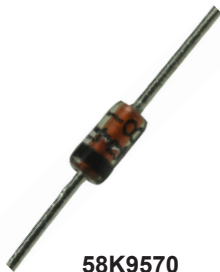
### Features

- Cathode indicated by polarity band
- 1200V Non-repetitive peak reverse voltage
- 700V RMS reverse voltage

### Specifications

Repetitive Reverse Voltage V <sub>rrm</sub>	: 1kV Max.
Forward Current I <sub>f</sub> (AV)	: 1A
Diode Configuration	: Single
Forward Voltage V <sub>F</sub>	: 1.35V Max.
Forward Surge Current I <sub>fsm</sub>	: 30A Max.
Operating Temperature	: 150°C Max.
Diode Case Style	: DO-204AL
No. of Pins	: 2Pins

## Small Signal Diode, Single, 100V, 200mA, 1V, 4ns, 1A



58K9570

### Description

The product is an axial leaded small signal diode. This diode features unidirectional configuration.

### Features

- Forward surge current of 4A at pulse width 1μs and 1A at pulse width 1s
- Maximum repetitive reverse voltage of 100V
- Power dissipation is 500mW
- Forward voltage of 1V at 10mA
- Reverse recovery time of 4ns

### Specifications

Repetitive Reverse Voltage V <sub>rrm</sub>	: 100V Max.
Forward Current I <sub>f(AV)</sub>	: 200mA
Forward Voltage V <sub>F</sub>	: 1V Max.
Forward Surge Current I <sub>fsm</sub>	: 1A Max.
Operating Temperature	: 175°C Max.
Diode Case Style	: DO-204AH

## Zener Single Diode, 5.1V, 500mW, DO-35, 5%, 2 Pins, 175°C



90R9455

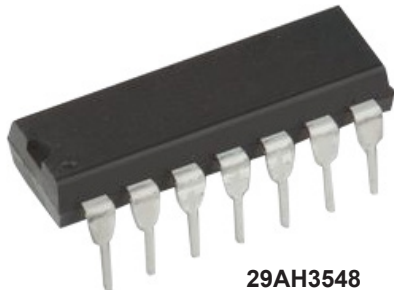
### Features

- High reliability
- <5μA Reverse leakage current at 2V<sub>R</sub>

### Specifications

Zener Voltage V <sub>z</sub> Typ	: 5.1V
Power Dissipation P <sub>d</sub>	: 500mW
Diode Case Style	: DO-35
Zener Tolerance ±	: 5%
No. of Pins	: 2Pins
Operating Temperature Max	: 175°C

## Complementary Pair Plus Inverter, Dual, 3V to 18V Supply, DIP-14



29AH3548

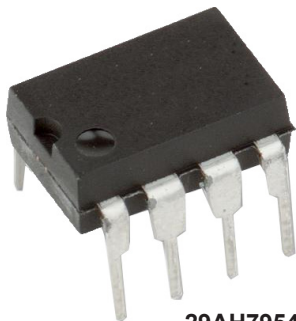
### Features

- Standardized symmetrical output characteristics
- Medium speed operation - tPHL, tPLH=30ns (typical) at 10V
- 100% Tested for quiescent current at 20V
- Maximum input current of 1μA at 18V

### Specifications

Logic Type	: Inverter
Logic Case Style	: DIP
No. of Pins	: 14Pins
Supply Voltage Min	: 3V
Supply Voltage Max	: 18V
Operating Temperature Range	: -55°C to +125°C

## Operational Amplifier, 1 Amplifier, 4MHz, 13V/μs, 7V to 36V, DIP, 8 Pins



29AH7954

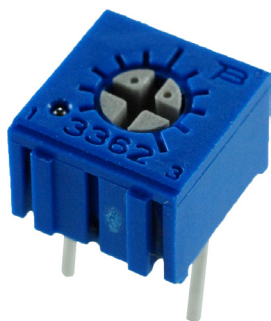
### Features

- Low power consumption of 1.4mA/channel
- Wide common mode and differential voltage ranges
- Unity gain bandwidth of 3MHz
- High slew rate of 13V/μs
- Supply voltage range from 7V to 36V
- Low input bias current of 30pA
- Low input offset current of 5pA
- Output short circuit protection
- High input impedance JFET input stage

### Specifications

No. of Amplifiers	: 1 Amplifier
Bandwidth	: 4MHz
Slew Rate	: 13V/μs
Supply Voltage Range	: 7V to 36V
Amplifier Case Style	: DIP
No. of Pins	: 8Pins
Operating Temperature Range	: 0°C to +70°C

## Trimpot, Single Turn, Cermet, Top Adjust, 10k $\Omega$ , Through Hole, 1 Turns



62J1882

### Specifications

Trimpot Type	: Single Turn
Element Material	: Cermet
Adjustment Type	: Top Adjust
Track Resistance	: 10k $\Omega$
Potentiometer Mounting	: Through Hole
No. of Turns	: 1Turns
Power Rating	: 500mW
Resistance Tolerance	: $\pm 10\%$
Temperature Coefficient	: $\pm 100\text{ppm}/^\circ\text{C}$
Trimpot Shape / Size	: 1/4 Inch Square

## Power MOSFET, N Channel, 60V, 500mA, 1.2 $\Omega$ , TO-92, Through Hole



58K8772

### Features

- Voltage Controlled Small Signal Switch
- Rugged and Reliable
- High Saturation Current Capability

### Specifications

Transistor Polarity	: N Channel
Drain Source Voltage Vds	: 60V
Continuous Drain Current Id	: 500mA
On Resistance Rds(on)	: 1.2 $\Omega$
Transistor Case Style	: TO-92
Transistor Mounting	: Through Hole
Rds(on) Test Voltage Vgs	: 10V
Threshold Voltage Vgs	: 2.1V
Power Dissipation Pd	: 830mW
No. of Pins	: 3Pins
Operating Temperature Max	: +150 $^\circ\text{C}$
MSL	: MSL 1 - Unlimited

## Power MOSFET, P Channel, 100V, 230mA, 8Ω, TO-226AA, Through Hole



98K4111

### Description

The product is a -100V E-Line P-channel Enhancement Mode Vertical DMOS FET with 8Ω resistance and 700mW power dissipation.

### Applications

Power Management, Motor Drive & Control, Audio, Automotive

### Specifications

Transistor Polarity	: P Channel
Drain Source Voltage V <sub>ds</sub>	: 100V
Continuous Drain Current I <sub>d</sub>	: 230mA
On Resistance R <sub>ds(on)</sub>	: 8Ω
Transistor Case Style	: TO-226AA
Transistor Mounting	: Through Hole
R <sub>ds(on)</sub> Test Voltage V <sub>gs</sub>	: 10V
Threshold Voltage V <sub>gs</sub>	: 3.5V
Power Dissipation P <sub>d</sub>	: 700mW
No. of Pins	: 3Pins
Operating Temperature Max	: +150°C
MSL	: MSL 1 - Unlimited

## Bipolar (BJT) Single Transistor, NPN, 40V, 1A, 625mW, TO-226AA, Through Hole



58K2047

### Features

- 75V Collector to base voltage (VCBO)
- 6V Emitter to base voltage (VEBO)
- 83.3°C/W Thermal resistance, junction to case
- 200°C/W Thermal resistance, junction to ambient
- 60ns Fall time (T<sub>A</sub> = 25°C)

### Specifications

Transistor Polarity	: NPN
Collector Emitter Voltage V <sub>(br)ceo</sub>	: 40V
DC Collector Current	: 1A
Power Dissipation P <sub>d</sub>	: 625mW
Transistor Case Style	: TO-226AA
Transistor Mounting	: Through Hole
No. of Pins	: 3Pins
Transition Frequency f <sub>t</sub>	: 300MHz
DC Current Gain h <sub>FE</sub>	: 35hFE
Operating Temperature Max	: 150°C
MSL	: MSL 1 - Unlimited

## JFET Transistor, Junction Field Effect, -35V, 5mA, -5V, TO-92, JFET



58K8918

### Features

- Source and drain are interchangeable
- Gate to source breakdown voltage of 35V
- Gate to source cut-off voltage of 5V
- Zero gate voltage drain current of 5mA
- Operating junction temperature of -55°C to +150°C

### Specifications

Breakdown Voltage Vbr	: -35V
Zero Gate Voltage Drain Current Idss	: 5mA Min.
Gate-Source Cutoff Voltage Vgs(off)	: -5V Max.
Transistor Case Style	: TO-92
Transistor Type	: JFET
No. of Pins	: 3 Pin
Operating Temperature Max	: +150°C
MSL	: MSL 1 - Unlimited

## Bipolar (BJT) Single Transistor, PNP, -60V, -800mA, 625mW, TO-226AA, Through Hole



31Y3455

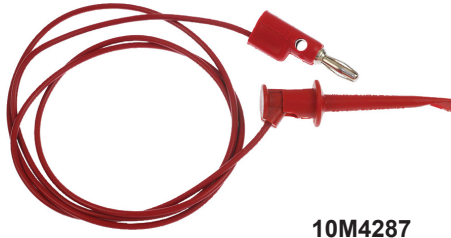
### Features

- 75V Collector to base voltage (VCBO)
- 6V Emitter to base voltage (VEBO)
- 83.3°C/W Thermal resistance, junction to case
- 200°C/W Thermal resistance, junction to ambient
- 60ns Fall time (TA = 25°C)

### Specifications

Transistor Polarity	: PNP
Collector Emitter Voltage V(br)ceo	: -60V
DC Collector Current	: -800mA
Power Dissipation Pd	: 625mW
Transistor Case Style	: TO-226AA
Transistor Mounting	: Through Hole
No. of Pins	: 3Pins
Transition Frequency ft	: 200MHz
DC Current Gain hFE	: 50hFE
Operating Temperature Max	: +150°C

## Minigrabber Test Clip to Stacking Banana plug, 36", Red



10M4287

### Features

- Provides a Minigrabber output from a Banana Jack
- Banana plug is capable of vertical and cross stacking
- Mates to Model 1581 or any standard Banana Jack
- Cable length is 36" (914mm)
- Colour is Red

### Specifications

Test Connector Type A	: Hook Clip
Test Connector Type B	: 4mm Stackable Banana Plug
Voltage Rating	: 60V
Current Rating	: 5A
Insulator Colour	: Red
Lead Length - Metric	: 914.4mm
Lead Length - Imperial	: 36"

## Through Hole Resistor, 10MΩ, 250mW, ±5%, Axial Leaded, 250V



58K5005

### Features

- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range

### Specifications

Resistance	: 10MΩ
Power Rating	: 250mW
Resistance Tolerance	: ± 5%
Resistor Case Style	: Axial Leaded
Resistor Element Type	: Carbon Film
Temperature Coefficient	: -1500ppm/°C

## Through Hole Resistor, 150k $\Omega$ , 250mW, $\pm 5\%$ , Axial Leaded, 250V



58K5017

### Features

- 1000M $\Omega$  Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range

### Specifications

Resistance	: 150k $\Omega$
Power Rating	: 250mW
Resistance Tolerance	: $\pm 5\%$
Resistor Case Style	: Axial Leaded
Voltage Rating	: 250V
Resistor Element Type	: Carbon Film
Temperature Coefficient	: -700ppm/°C

## Through Hole Resistor, 15k $\Omega$ , 250mW, $\pm 5\%$ , Axial Leaded, 250V



58K5016

### Features

- 1000M $\Omega$  Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range

### Specifications

Resistance	: 15k $\Omega$
Power Rating	: 250mW
Resistance Tolerance	: $\pm 5\%$
Resistor Case Style	: Axial Leaded
Voltage Rating	: 250V
Resistor Element Type	: Carbon Film
Temperature Coefficient	: -450ppm/°C



## Through Hole Resistor, 220k $\Omega$ , 250mW, $\pm 5\%$ , Axial Leaded, 250V



58K5032

### Features

- 1000M $\Omega$  Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range

### Specifications

Resistance	: 220k $\Omega$
Power Rating	: 250mW
Resistance Tolerance	: $\pm 5\%$
Resistor Case Style	: Axial Leaded
Voltage Rating	: 250V
Resistor Element Type	: Carbon Film
Temperature Coefficient	: -700ppm/°C

## Through Hole Resistor, 2k $\Omega$ , 250mW, $\pm 5\%$ , Axial Leaded, 250V



58K5025

### Features

- 1000M $\Omega$  Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range

### Specifications

Resistance	: 2k $\Omega$
Power Rating	: 250mW
Resistance Tolerance	: $\pm 5\%$
Resistor Case Style	: Axial Leaded
Voltage Rating	: 250V
Resistor Element Type	: Carbon Film
Temperature Coefficient	: -450ppm/°C

## Through Hole Resistor, 33k $\Omega$ , 250mW, $\pm 5\%$ , Axial Leaded, 250V



58K5044

### Features

- 1000M $\Omega$  Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range

### Specifications

Resistance	: 33k $\Omega$
Power Rating	: 250mW
Resistance Tolerance	: $\pm 5\%$
Resistor Case Style	: Axial Leaded
Voltage Rating	: 250V
Resistor Element Type	: Carbon Film
Temperature Coefficient	: -450ppm/°C

## Through Hole Resistor, 470k $\Omega$ , 250mW, $\pm 5\%$ , Axial Leaded, 250V



58K5058

### Features

- 1000M $\Omega$  Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to +155°C Operating temperature range

### Specifications

Resistance	: 470k $\Omega$
Power Rating	: 250mW
Resistance Tolerance	: $\pm 5\%$
Resistor Case Style	: Axial Leaded
Voltage Rating	: 250V
Resistor Element Type	: Carbon Film
Temperature Coefficient	: -700ppm/°C

## Through Hole Resistor, 510Ω, 250mW, ± 5%, Axial Leaded, 250V



### Features

- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range

### Specifications

Resistance	: 510Ω
Power Rating	: 250mW
Resistance Tolerance	: ± 5%
Resistor Case Style	: Axial Leaded
Voltage Rating	: 250V
Resistor Element Type	: Carbon Film
Temperature Coefficient	: -450ppm/°C

## Through Hole Resistor, 6.8kΩ, 250mW, ±5%, Axial Leaded, 250V



### Features

- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range

### Specifications

Resistance	: 6.8kΩ
Power Rating	: 250mW
Resistance Tolerance	: ± 5%
Resistor Case Style	: Axial Leaded
Voltage Rating	: 250V
Resistor Element Type	: Carbon Film
Temperature Coefficient	: -450ppm/°C

## Through Hole Resistor, 3.9kΩ, 250mW, ±1%, Axial Leded, 250V



59K8674

### Description

The axial-leaded precision metal film Fixed Resistor with multiple epoxy coating on vacuum-deposited metal film provides superior moisture protection. It offers nichrome resistor element provides stable performance in various environments.

### Features

- EIA standard colour-coding
- Non-flame type available
- Low noise and voltage coefficient
- Low temperature coefficient range
- Wide precision range in small package
- Too low or too high ohmic value can be supplied on a case to case basis

### Specifications

Resistance	: 3.9kΩ
Power Rating	: 250mW
Resistance Tolerance	: ±1%
Resistor Case Style	: Axial Leaded
Voltage Rating	: 250V
Resistor Element Type	: Metal Film
Temperature Coefficient	: ±50ppm/°C

## Through Hole Resistor, 680kΩ, 250mW, ±1%, Axial Leded, 250V



58K3876

### Description

The axial-leaded precision metal film Fixed Resistor with multiple epoxy coating on vacuum-deposited metal film provides superior moisture protection. It offers nichrome resistor element provides stable performance in various environments.

### Features

- EIA standard colour-coding
- Non-flame type available
- Low noise and voltage coefficient
- Low temperature coefficient range
- Wide precision range in small package
- Too low or too high ohmic value can be supplied on a case to case basis

### Specifications

Resistance	: 680kΩ
Power Rating	: 250mW
Resistance Tolerance	: ±1%
Resistor Case Style	: Axial Leaded
Voltage Rating	: 250V
Resistor Element Type	: Metal Film
Temperature Coefficient	: ±50ppm/°C

## Through Hole Resistor, 68k $\Omega$ , 250mW, $\pm 5\%$ , Axial Leaded, 250V



### Features

- 1000M $\Omega$  Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range

### Specifications

Resistance	: 68k $\Omega$
Power Rating	: 250mW
Resistance Tolerance	: $\pm 5\%$
Resistor Case Style	: Axial Leaded
Voltage Rating	: 250V
Resistor Element Type	: Carbon Film
Temperature Coefficient	: -450ppm/ $^{\circ}$ C

## Kit Contents

Order Code	Description	Quantity
29AH7536	Binary Synchronous Counter, 44MHz, 2V to 6V, DIP-16	1
42K2831	Standard Recovery Diode, 1kV, 1A, Single, 1.35V, 30A	4
58K9570	Small Signal Diode, Single, 100V, 200mA, 1V, 4ns, 1A	4
90R9455	Zener Single Diode, 5.1V, 500mW, DO-35, 5%, 2 Pins, 175°C	2
29AH3548	Complementary Pair Plus Inverter, Dual, 3V to 18V Supply, DIP-14	3
29AH7954	Operational Amplifier, 1 Amplifier, 4MHz, 13V/μs, 7V to 36V, DIP, 8 Pins	4
62J1882	Trimpot, Single Turn, Cermet, Top Adjust, 10kΩ, Through Hole, 1 Turns	2
58K8772	Power MOSFET, N Channel, 60V, 500mA, 1.2Ω, TO-92, Through Hole	6
98K4111	Power MOSFET, P Channel, 100V, 230mA, 8Ω, TO-226AA, Through Hole	4
58K8918	JFET Transistor, Junction Field Effect, -35V, 5mA, -5V, TO-92, JFET	2
58K2047	Bipolar (BJT) Single Transistor, NPN, 40 V, 1 A, 625 mW, TO-226AA, Through Hole	4
31Y3455	Bipolar (BJT) Single Transistor, PNP, -60V, -800mA, 625mW, TO-226AA, Through Hole	4
10M4287	Minigrabber Test Clip to Stacking Banana plug, 36", Red	2
58K5005	Through Hole Resistor, 10MΩ, 250mW, ±5%, Axial Leaded, 250V	4
58K5017	Through Hole Resistor, 150kΩ, 250mW, ±5%, Axial Leaded, 250V	2
58K5016	Through Hole Resistor, 15kΩ, 250mW, ±5%, Axial Leaded, 250V	5
58K5032	Through Hole Resistor, 220kΩ, 250mW, ±5%, Axial Leaded, 250V	2
58K5025	Through Hole Resistor, 2kΩ, 250mW, ± 5%, Axial Leaded, 250V	5
58K5044	Through Hole Resistor, 33kΩ, 250mW, ±5%, Axial Leaded, 250V	5
58K5058	Through Hole Resistor, 470kΩ, 250mW, ±5%, Axial Leaded, 250V	2
59K8386	Through Hole Resistor, 510Ω, 250mW, ± 5%, Axial Leaded, 250V	10
58K5069	Through Hole Resistor, 6.8kΩ, 250mW, ±5%, Axial Leaded, 250V	5
59K8674	Through Hole Resistor, 3.9kΩ, 250mW, ±1%, Axial Leaded, 250V	5
58K3876	Through Hole Resistor, 680kΩ, 250mW, ±1%, Axial Leaded, 250V	2
58K5070	Through Hole Resistor, 68kΩ, 250mW, ±5%, Axial Leaded, 250V	5

## Part Number Table

Description	Part Number
Assortments & Kits	EC410 PACK

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