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Passive Components

Tyco Electronics

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Introduction

Tyco Electronics is one of the major business units of Tyco International Ltd. (NYSE:TYC, LSE:TYI, BSX:TYC). Headquartered in Harrisburg, Pennsylvania, USA, Tyco Electronics is the world's largest passive electronic components manufacturer, and a world leader in cutting-edge wireless technologies, fibre optic active components, and complete power systems. The company has facilities located in 51 countries serving customers in the aerospace, automotive, computer, communications, consumer electronics, industrial and power industries.

Tyco Electronics provides advanced technology products from over thirty well-known and respected product brands, including Agastat, Alcoswitch, AMP, AMP NETCONNECT, Buchanan, CII, CoEv, Critchley, Elcon, Elo Touch Systems, HTS, M/A-COM, Madison Cable, OEG, Potter & Brumfield, Raychem, Schrack, Simel and TDI Batteries.



Tyco Electronics' product portfolio now includes a comprehensive range of passive components, including surface mount and leaded resistors, trimmers, potentiometers, PTC and NTC surface mount thermistors, as well as a wide range of inductive products covering wirewound, metal film surface mount, ceramic and ferrite bead.

A range of SMD Capacitors, including Multi Layer Ceramic (MLCC), Tantalum and Aluminium Electrolytic completes the Passive Components product portfolio.

The Holsworthy range of precision resistors meets the requirement for economically priced components for both industrial and military applications. In SMD and leaded packages, with tolerances down to 0.05% and TCRs as low as 5ppm, the Holsworthy range from Tyco Electronics delivers the "Complete Precision Portfolio".

For all trimming solutions, the Citec brand is the ideal design partner where your circuit requires sealed or unsealed trimmers from just 2mm square. Multiturns for precision trimming are available with 11 or 12 turn setability. Further, Citec offers a prestigious range of potentiometers, from single and multiturn versions with cermet or carbon elements, through to switched options with shafts in either plastic or metal.

Sigma noise suppression and protection inductor chips from Tyco Electronics can help protect circuits in a variety of ways. The range offers solutions for high power, high speed, low frequency noise impedance as well as temperature responsive resistors in PTC and NTC. Sigma also encompasses a wide range of wound, multilayered and printed inductors in addition to noise reduction bead inductors and through-hole RF chokes.

CGS high power and high voltage resistors are rated up to 100W with voltage proof to 50kV and are available in a wide variety of package styles. High power and pulse resistors in the CGS range are capable of dissipating up to 25,000 Watts for applications such as regenerative braking and power supplies.

The Neohm range of commodity resistors are available with SMD and Leaded devices. This wide range of products compliments and supports the Passives range available from the Tyco Electronics portfolio.

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Dimensions are shown in mm for reference purposes only.

Specifications subject to change.

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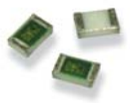
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Resistive Products, Fixed - Surface Mount

Product Type	Commodity CRG / 3520	High Ohmic RH73	Fusible FCR	Trimmable TCR	Commodity MCN
					
Features	0201 to 2512 Package Sizes	0402 to 2512 Package Sizes	0805 and 1206 Package Sizes	0805 and 2512 Package Sizes	2, 4, or 8 x 0603 Resistors
	1R0 to 10M Value Range	10M to 100G Value Range	1R0 to 5IR Value Range	1R0 to 10M Value Range	10R to 1M Value Range
	Tolerances down to 1% and 5%	Tolerances down to 2%	5% Tolerance	Trimming Ratios up to 3 Times	±1%, ±2% ±5% Tolerances
	TCR ±200ppm/°C max.	TCR's down to 100ppm/°C	2.0W or 2.5W Fusing Power	TCR's down to 100ppm/°C	TCR ±200ppm/°C max.
	500 Volt Maximum Overload	Special Values Possible	30 Seconds Fusing Time	Up to 1W Dissipation	Concave or Convex Terminals

Product Type	Ultra Precision RN73	Precision CPF	Precision Thick Film CPG	Precision MRS	Precision SU
					
Features	0402 to 1210 Package Sizes	0402 to 1206 Package Sizes	0603 to 1206 Package Sizes	4 x 0603 Resistors	0.125W to 0.50W
	5R0 to 1M Value Range	5R1 to 1M Value Range	10R to 4M7 Value Range	10R to 330K Value Range	1R0 - 2M0 Value Range
	0.01% Tolerance	Tolerances down to 0.1%	Tolerances down to 0.5%	Tolerances down to 0.1%	Tolerances down to 0.005%
	TCR 10ppm/°C max.	TCR's down to 25ppm/°C	TCR's down to 50ppm/°C	TCR's down to 25ppm/°C	TCR's down to 10ppm/°C
	0805-E96 Values in Distribution	E24 and E96 Value Grid	E24 and E96 Value Grid	1206 Real Estate	Available in E192 Value grid

Product Type	Low Ohmic RL73	Low Ohmic TL / HL	Low Ohmic SL	Power Wirewound SP	Power SM
					
Features	0402 to 2512 Package Sizes	0.25W to 2.0W Dissipation	0.5W& 3.0W Dissipation	0.75W to 3.5W @ 25°C Dissipation	1W to 5W Dissipation
	Values down to R10	R001 to 1R0 Value Range	R01 to R011 Value Range	R06 to 45K Value Range	R10 to 2M Value Range
	Tolerances down to 1%	1% Tolerance	1% - 5% Tolerance	Tolerances down to 0.1%	1% or 5% Tolerances
	TCR 100ppm/°C or 200ppm/°C	Down to TCR +50ppm/°C	Down to 4.7nH Inductance	TCR's down to 20ppm/°C	200ppm/°C Wire / 100ppm/°C Film
	2512 E12 Grid in Distribution	Non Inductive Foil Element	4 Package Sizes	Suited to Pulse Applications	True Pick and Place Body Style

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August 2007

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Resistive Products, Fixed - Leaded

Product Type	Metal Film Precision H4P / H4 / H8	Metal Film Semi Precision R	Standard Metal Film LR	Precision Wirewound UPW
				
Features	0.25W to 1.0W Dissipation	0.25W Dissipation	0.25W to 0.75W Dissipation	0.15W to 0.5W Dissipation
	1R0 to 10M Value Range	4R02 to 1M Value Range	R10 to 10M Value Range	R10 to 2M Value Range
	Tolerances down to 0.05%	0.1% to 1% Tolerance	1%, 2% or 5% Tolerance	Tolerances down to 0.005%
	TCR's down to 5ppm/°C	TCR's down to 15ppm/°C	TCR's down to 10ppm/°C	TCR's down to 1ppm/°C
	Released to BS/CECC	E96 Value Grid	Taped Ammo Pack to IEC286-1	Low Inductance

Product Type	Carbon Film CFR	Metal Oxide RSS / ROX	Fusible FRN / SQF / FKN	Metal Glaze RGP	High Voltage Thick Film HH / HJ
					
Features	0.25W to 2.0W Dissipation	0.5W to 7.0W Dissipation	1W to 10W Dissipation	0.25W to 4.0W Dissipation	0.5W to 6.0W Dissipation
	1R0 to 10M Value Range	1R0 to 200K Value Range	R10 to 150R Value Range	1M to 10G Value Range	100K to 50G Value Range
	2% or 5% Tolerance	±5% Tolerance	Axial or Radial Leaded	5% or 10% Tolerance	Tolerances down to 0.5%
	Small Body Sizes Available	Axial Leaded	5% Tolerance	±0.005%/V Voltage Coefficient	TCR's down to 25ppm/°C
	Taped Ammo Pack to IEC286-1	Ammo Packed or Reeled	TCR 300ppm/°C max.	TCR 350ppm/°C max.	Axial Leaded

Product Type	High Voltage Thick Film HB	High Voltage Thick Film HVR	High Power Thick Film BDS	High Power Thick Film MPC	Thin Film Power MPR
					
Features	Dissipation up to 2W @ 70°C	Up to 100 W Dissipation (in oil)	100W to 600W Dissipation	3W to 10W Dissipation	20W Dissipation (Heatsink)
	1K to 1G Value Range	2K to 1G Value Range	R20 to 1M Value Range	1R0 to 200K Value Range	R22 to 51K Value Range
	Tolerance down to 1%	Tolerances down to 1%	5% or 10% Tolerance	1% or 5% Tolerance	TO220 Package
	Up to 15kV Voltage Rating	Up to 50KV Voltage Rating	TCR 150ppm/°C max.	TCR ±100ppm/°C max.	1% (E24), 5% (E12) Tolerances
	Axial / Radial Options	Various Mounting Styles	Customised as Required	Radial Leads	TCR down to ±50ppm/°C

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Resistive Products, Fixed - Leaded

Product Type	Power Wirewound SBC / SBCHE	Power Wirewound SQP / SQM / SQZ	Power Wirewound C3A / C7 / C10 / C14	Power Wirewound ER	Power Wirewound ES
					
Features	3W to 40W Dissipation	2W to 25W Dissipation	3W to 14W Dissipation	3W to 14W Dissipation	0.5W to 10W Dissipation
	R10 to 22K Value Range	R10 to 150K Value Range	R10 to 100K Value Range	R01 to 100K Value Range	R10 to 3K3 Value Range
	10% or 5% Tolerance	5% Tolerance	10%, 5% or 2% Tolerance	Tolerances down to 0.5%	5% Tolerance
	Radial and Axial Styles	Radial and Axial Styles	Axial Leaded	Axial and Radial Types	Super Small Size available
	2000V Dielectric Strength	Wire or Power Oxide	3W and 7W Ammo Packed	Custom Designs as Required	Taped and Ammo Packed

Product Type	Power Wirewound HS / THS	Power Wirewound FC	Power Wirewound ME	Power Wirewound TG	Power Wirewound TT / TK
					
Features	5W to 300W Dissipation	2W to 8W Dissipation	Up to 500W Dissipation	Up to 293W Dissipation	10W to 1000W Dissipation
	R01 to 82K Value Range	R20 to 22K Value Range	R02 to 22K Value Range	R24 to 100K Value Range	R20 to 70K Value Range
	Tolerances down to 0.25%	5% or 10% Tolerance	5% or 10% Tolerance	5% or 10% Tolerance	5% or 10% Tolerance
	High Voltage Versions	Radial Leads	Fixed or Adjustable	Glass Bond Coated	Fixed or Adjustable
	Low Inductance Styles	Two Height Profiles	Range of Terminal Style	6000J Pulse Energy	Range of Mounting Styles

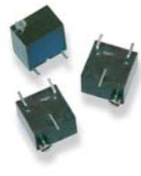
Product Type	Foil Low Ohmic SBL	Wire Shunt OS / OP	Zerohm Link ZR	Carbon Moulded CBT	Ceramic Composition CCR
					
Features	4W and 5W Dissipation	Values from R003 to R150	Two Case Sizes	0.25W, 0.5W Dissipation	0.5, 1.0, 2.0W Power Dissipation
	R005 to R051 Value Range	2 Different Styles	< 2 milliohm Resistance	2R2 to 22M Value range	Up to 20kV Impulse Withstand
	1% or 5% Tolerance	Current Rating to 21A	Dielectric Strength - 500V	E24 - 5% E12 - 10% Tolerance	Tolerance 10%
	2KV Dielectric Strength	5% Tolerance as Standard	> 10G Insulation Resistance	Up to 750V Overload	Up to 400V Working Voltage
	Essentially Non Inductive	Custom Designs Available	Taped Ammo Pack to IEC286-1	Low Inductance	3R3 to 390K Value Range

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Resistive Products, Trimmers - Surface Mount

Product Type	Open Frame 3121	Open Frame 3130	Open Frame 3135	Open Frame 3142	Open Frame 3150 / 3165
					
Features	Board Area - 2.2mm x 2.75mm	Board Area - 3.75mm x 3mm	3mm Square Nominal	4mm Square Nominal	4mm Square Nominal
	Height 1.8mm	Height 1.85mm Max.	Height 1.2mm Max.	Height 2.4mm	Lightweight - 0.2 Grams
	200R to 1M Value Range	100R to 1M Value Range	100R to 1M Value Range	100R to 1M Value Range	100R to 1M Value Range
	25% Tolerance	Auto Adjust Version	Delta Terminals	Delta Terminals	In-line or Delta Terminals
	50V DC Operating Voltage	50V DC Operating Voltage	Integrated End Stop	50V DC Operating Voltage	Underside Adjust Version

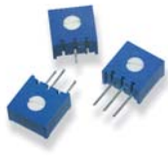
Product Type	Semi Sealed 3103	Semi Sealed 3203	Semi Sealed 3204
			
Features	Board Area - 3.6mm x 3.1mm	Board Area - 3.4mm x 3.4mm	Board Area - 4mm x 4.5mm
	Height < 1.8mm	Height < 2.1mm	Height 2.4mm
	500R to 1M Value Range	100R to 1M Value Range	100R to 1M Value Range
	0.05W Dissipation @ 50°C	0.05W Dissipation	0.1W Dissipation
	Sealed for Processing	Sealed for Processing	Sealed for Processing

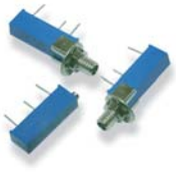
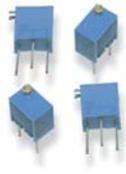
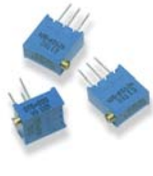
Product Type	Sealed 3212	Sealed 3213	Sealed 3315	Multiturn 3240	Multiturn 3270
					
Features	Board Area - 2.4mm x 2.8mm	Board Area - 3.4mm x 3.4mm	Board Area - 5mm x 5mm	4mm Square Nominal	6mm Square Nominal
	Height 1.7mm	Height 2.0mm	Height 2.5mm	Top and Side Adjust Styles	Top and Side Adjust Styles
	100R to 1M0 Value Range	10R to 1M0 Value Range	10R to 2M Value Range	10R to 2M Value Range	10R to 1M Value Range
	20% Tolerance	20% Tolerance	20% Tolerance	10% Tolerance	10% Tolerance
	O-ring Sealed	O-ring Sealed	O-ring Sealed	11 Turns	12 Turns

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Resistive Products, Trimmers - Leaded

Product Type	Economy CT6	Economy 416	Economy 409	Economy CB10	Economy CB15 / CT15
					
Features	6mm Single Turn	6mm Single Turn	10mm Single Turn	Carbon Element	Carbon Element
	200R to 1M Value Range	100R to 1M Value Range	100R to 1M Value Range	100R to 10M Value Range	100R to 4M7 Value Range
	0.1W Dissipation	0.2W Dissipation	0.5W Dissipation	0.15W Log /0.25W Lin Dissipation	0.15W Log /0.25W Lin Dissipation
	Top and Side Adjust Versions	Top and Side Adjust Versions	100 Cycles Maximum	Long Life Version (>10,000 cycles)	Long Life (>10,000 cycles)
	Resin Moulded Technology	Dust and Splash Proof	Dust and Splash Proof	Enclosed Package	Plug in Shaft Available

Product Type	Professional 470	Professional 4265	Professional 4275	Professional 4295
				
Features	6mm Single Turn	6mm Single Turn Sealed	6mm Single Turn Sealed	10mm Single Turn Sealed
	10R to 1M Value Range	10R to 2M Value Range	10R to 2M Value Range	10R to 2M Value Range
	10% Tolerance	0.5W Dissipation	0.5W Dissipation	0.5W Dissipation
	0.5W Dissipation	20% Tolerance Standard	10% Tolerance Standard	TCR ±100ppm/°C
	Fully Sealed	Three Pin Layouts/Taped Versions	Three Pin Layouts/Taped Versions	Five Pin Layouts

Product Type	Multiturn 433	Multiturn 4270	Multiturn 4290
			
Features	19mm Multiturn Sealed	6mm Multiturn Sealed	10mm Multiturn Sealed
	10R to 2M Value Range	50R to 2M Value Range	50R to 2M Value Range
	0.75W Dissipation	0.25W Dissipation	0.5W Dissipation
	15 Electrical Turns	12 Electrical Turns	25 Electrical Turns
	Panel Mount Available	Wide Variety of Styles	Wide Variety of Styles

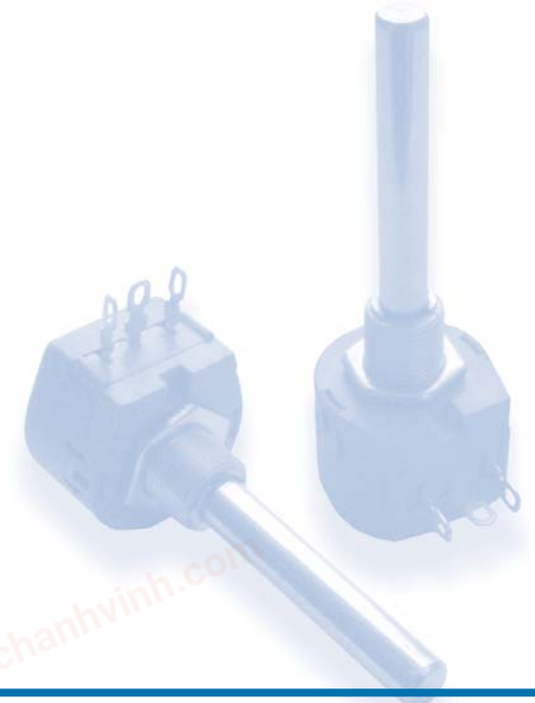
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Resistive Products, Potentiometers - Leaded

Product Type	Economy PC610	Economy 31 / 23	Economy 51 / 54 / 56	Economy 17P	Economy CP16
					
Features	9mm Square Pluggable	20mm/16mm Round Body	16mm Package	16mm Square all Plastic Body	16mm Square Package
	Polymer Element	Printed Carbon Element	Polymer Element	Polymer Thick Film Element	Polymer Thick Film Element
	500R to 500K Value Range	1K to 1M Value Range (Linear)	470R to 2M2 Value Range	1K to 1M Value Range (Lin)	100R to 4M7 Value Range
	0.05W Dissipation	0.25W Log/0.4W Lin Dissipation	0.25W Dissipation	0.25W Dissipation	0.1W Log/0.2W Lin Dissipation
	Non Linear Laws Available	Non Linear Laws Available	Non Linear Laws Available	Non Linear Laws Available	Non Linear Laws Available
	10,000 Operations minimum	Dual Gang & Switched Styles	Switched Version	Multigangs, Switches Available	Switches Available

Product Type	Professional CS9	Professional TW	Professional 5930 / 5940	Professional LC	Professional MC
					
Features	9mm Square Body	265° Travel	10 Turn Multiturn	13mm Round Body	19mm Round Body
	Polymer Element	Wirewound Element	Wirewound Element	Cermet Element	Cermet Element
	5K to 250K Value Range	5R to 22K Value Range	200R to 100K Value Range	100R to 2M2 Value Range	100R to 2M2 Value Range
	0.05W Dissipation	1 Watt @ 40°C	2W Dissipation	1W Dissipation	2W Dissipation
	Linear or Logarithmic Laws	TCR - 100 ppm	<0.25% Linearity	O-ring Spindle Sealed	O-ring Spindle Sealed
	Multigangs, Switches Available	5000 Operations	Range of Dials Available	25,000 Operations minimum	25,000 Operations minimum

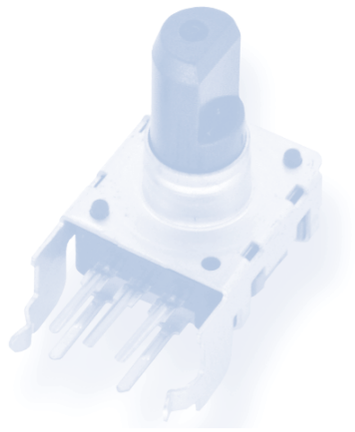
Product Type	Economy RW	Rheostats BFA
		
Features	40mm Enclosed Body	Wirewound Variable Load
	Wirewound Element	Up to 811W Dissipation
	10R to 100K Value Range	Current up to 10 Amps
	1W (RW1), 3W (RW3) Dissipation	5 Case Sizes
	Linear Laws Only	Operates up to 400°C
	Excellent Linearity	Protective Case



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Encoders - Leaded

Product Type	Contact Encoder DP(S) 9	Contact Encoder DP(S) 12	Contact Encoder DP(S) 15
			
Features	9mm Square	12mm Square	12mm Square
	Switch / Detent Options	Switch / Detent Options	Switch / Detent Options
	Vertical / Horizontal Mounting	Vertical / Horizontal Mounting	Vertical / Horizontal Mounting
	Various Shaft Configurations	Various Shaft Configurations	Various Shaft Configurations
	12 / 24 Pulses	12 / 24 Pulses	12 / 24 Pulse



Encoders - Leaded, with Illuminated Shaft

Product Type	Contact Encoder with LED DPSL 12
	
Features	Integrated Colour LED's (Yellow / Blue / Red / Orange / Green)
	Switch / Detent Options
	Vertical / Horizontal Mounting
	Various Shaft Configurations
	12 / 24 Pulses - 5V 0.5mA Rating



Resistive Products, Thermistors and Varistors

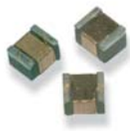
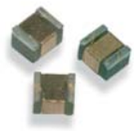
Product Type	Temperature Sense 8158	Temperature Sense NTC	Temperature Sense LT73	PTC Thermistor LT
				
Features	0402 to 1206 Package Sizes	0603 and 0805 Case Size	0805 and 1206 Package Styles	Axial Leaded
	40R to 500K Value Range	100R to 150K Value Range	510R to 6K2 Value Range	0.16W or 0.25W
	Tolerances down to 5%	5% or 10% Tolerance	5% Tolerance	Wide Temperature Range
	ß Values - 2800 to 4350 (NTC)	ß Values -2700 to 4100	TCR 3900ppm/°C max (PTC)	Values from 10R to 10K
	ß Value Tolerances down to 1%	5% Tolerance on B Value	Operating Temp. -40°C to 150°C	Insulated Package Style

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Inductive Products, Moulded

Product Type	Moulded 3610	Moulded 3611	Moulded 3612	Moulded 3613	Moulded 3615
					
Features	0805, 1008, 1210, 1812 Packages	0805, 1008, 1210, 1812 Packages	0805, 1008, 1210, 1812 Packages	0805, 1008, 1210, 1812 Packages	Board Area 13mm x 5mm
	10µH to 1mH Value Range	10µH to 1mH Value Range	10µH to 1mH Value Range	10µH to 1mH Value Range	0.1µH to 1mH Value Range
	Temp.Range -25°C to 100°C	Temp.Range -25°C to 100°C	Temp.Range -25°C to 100°C	Temp.Range -25°C to 100°C	High Current (3.5A)
	Moulded Package	Moulded Package	Moulded Package	Moulded Package	Moulded Package
	Dip and Wave Solderable	Dip and Wave Solderable	Dip and Wave Solderable	Dip and Wave Solderable	Dip and Wave Solderable

Inductive Products, High Frequency

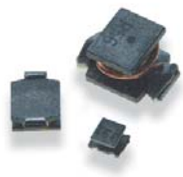
Product Type	High Frequency 3640	High Frequency 3650	High Frequency 3651 / 52 / 53	High Frequency 3670	High Frequency 3680
					
Features	0402 to 1206 Package Sizes	0603 to 1008 Package Sizes	0805 & 1008 Low Profile (3651)	0603 to 1206 Package Sizes	0402, 0603, 0805 Package Sizes
	1µH to 100mH Value (E12 Grid)	1.8nH to 4.7µH Value Range	0603 High Current (3652)	Low DC Resistance	1nH to 470nH Value Range
	DC Current 1200mA	DC Current up to 1Amp	0805 & 1008 High Q (3653)	Low Q Factor	DC Current 0.3 Amps
	Tolerances down to ±0.2µH	Tolerances down to 2%	Tolerances Down to 2%	High Reliability	Tolerances down to ±0.3 nH
	High Self Resonant Frequency	-40°C to 125°C Temp. Range	Up to 2.4A IDC	Range of Tolerances	E12 Value Grid

Inductive Products, Ferrite Beads

Product Type	BMB A & B Series	BMB R Series	BMB L Series	BMB P & S Series	BMB W Series
					
Features	0402 to 1812 Package Sizes	0603 to 1206 Package Sizes	0603 to 0805 Package Sizes	0603 to 1812 Package Sizes	0603 Size
	10R to 2K7 Impedance	26R to 600R Impedance	30R to 1K5 Impedance	10R to 600R Impedance	120R to 1K0 Impedance
	General Purpose Applications	Low Frequency Applications	High Current	High Current	Minimal Electromagnetic Interference
	High Frequency Applications	Prevents Signal Ringing	Signal Line Applications	Noise Filtering Applications	Minimises Stray Capacitance
	DC Current to 0.6A	DC Current to 0.4A	DC Current to 1A	DC Current to 6A	DC Current to 0.2A

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Inductive Products, Power, Surface Mount - Unshielded

Product Type	Power Chokes 3621	Power Chokes 3622	Power Chokes 3623	Power Chokes 3624	Power Chokes 3625
					
Features	Board Area from 3mm x 2.8mm	Board Area from 6.6mm x 4.5mm	Board Area from 22mm x 15mm	Board Area from 3.2mm x 1.6mm	Board Area from 6mm x 6mm
	Values 1µH to 15,000µH	Values 1µH to 10,000 µH	Values 0.8µH to 1,000µH	Values 0.12µH to 3,300µH	Values 1.5µH to 1,000µH
	Current up to 9.5 Amps	Current up to 10 Amps	Current up to 16 Amps	Current up to 9 Amps	Current up to 7.2 Amps
	Only 1.5mm Height	Less than 3mm Height	Less than 7mm Height	Less than 2mm Height	Less than 3mm Height
	12 Package Styles	4 Package Sizes	2 Package Sizes	8 Package Sizes	3 Package Sizes

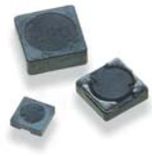
Product Type	Power Chokes 3626
	
Features	Board Area from 7.5mm x 7.5mm
	Values 10µH to 5,000µH
	Current up to 4 Amps
	Less than 4mm Height
	2 Package Sizes

Inductive Products, Leaded - Unshielded

Product Type	Insulated SC 10 / 20 / 30	Leaded Axial SC	Leaded Radial SC	Moulded MSC
				
Features	0402 to 1812 and Arrays	4 Package SIzes	4 Package SIzes	2 Case Sizes
	5R to 2K ohms impedance	Suited to Power Circuits	Suited to Power Circuits	0.1µH to 10mH Value (E12 Grid)
	DC Current up to 6 Amps	Wide Value Range	Wide Value Range	DC Current up to 1.79 Amps
	HS Signal Line, Digital Sound,	E12 Series Values	E12 Series Values	5% or 10% Tolerance
	High Current, High Loss, etc	DC Current to 1.7A	DC Current to 5.6A	Dielectric Strength up to 1KV

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Inductive Products, Power, Surface Mount - Shielded

Product Type	Shielded Power Chokes 3630	Shielded Power Chokes 3631	Shielded Power Chokes 3632	Shielded Power Chokes 3633	Shielded Power Chokes 3634
					
Features	Board Area from 6.5mm x 4.4mm	Board Area from 12.5mm x 12.5mm	Board Area from 10.5mm x 9.5mm	Board Area from 3.3mm x 3.5mm	Board Area from 3.8mm x 3.8mm
	Values 1µH to 10,000µH	Values 1.1µH to 1,500µH	Values 1.5µH to 15,000µH	Values 1µH to 220µH	Values 0.9µH to 1,000µH
	Current up to 4.5 Amps	Current up to 10.2 Amps	Current up to 5.6 Amps	Current up to 3.5 Amps	Current up to 4.6 Amps
	Less than 3mm Height	From 4mm Height	From 6mm Height	From less than 1mm Height	From less than 1.2mm Height
	6 Package Sizes	6 Package Sizes	2 Package Sizes	7 Package Sizes	9 Package Sizes

Product Type	Shielded Power Chokes 3635	Shielded Power Chokes 3636	Shielded Power Chokes 3637	Shielded Power Chokes 3638	Shielded Power Chokes 3639
					
Features	Board Area from 6.6mm x 6.6mm	Board Area 7.8mm x 7.5mm	Board Area from 7.5mm x 7.5mm	Board Area from 6mm x 6mm	Board Area from 8mm x 8mm
	Values .054µH to 7.4µH	Values 1.2µH to 5,600µH	Values 10µH to 1,500µH	Values 1µH to 1,000µH	Values 0.8µH to 330µH
	Current up to 38 Amps	Current up to 2.6 Amps	Current up to 4.6 Amps	Current up to 3.8 Amps	Current up to 7.8 Amps
	From 4.5mm Height	Less than 2.5mm Height	From 4mm Height	From less than 3mm Height	From less than 3mm Height
	2 Package Sizes	1 Package Size	3 Package Sizes	3 Package Sizes	5 Package Sizes

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Capacitive Products, Ceramic - Surface Mount

Product Type	NPO Dielectric TYC	X7R / X5R Dielectric TYC	Y5V Dielectric TYC
			
Features	Ultra Stable	Semi Stable and High K	General Purpose, High K
	Low ESR	High Volumetric Efficiency	High Volumetric Efficiency
	No Ageing of Capacitance	Extended Voltage Ratings	Non Polar Construction
	0201 to 1206 Sizes	0402 to 1206 Sizes	0402 - 1206 Sizes
	Tolerances down to ±1%	5% Tolerance Available	20% Tolerance Available

Capacitive Products, Tantalum - Surface Mount

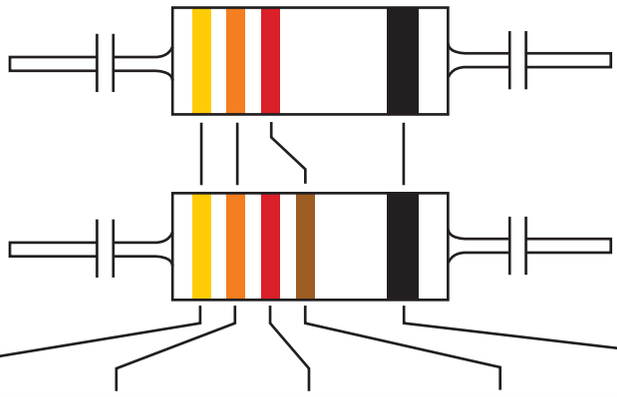
Product Type	Standard TYTS	Extended Range TYTM	0805 Case Size TYTP	Low ESR TYTR
				
Features	Full Value Range	Super Compact Size	Super Compact Size	Suited to High Frequency
	A, B, C & D Case Sizes	A, B, C & D Case Sizes	Suited to High Density PCB's	B, C & D Case Sizes
	4V to 50V Ratings	2.5V to 50V Ratings	2.5V to 25V Ratings	6V to 35V Ratings
	10% / 20% Tolerance	10% or 20% Tolerance	10% or 20% Tolerance	10% or 20% Tolerance
	RoHS Compliant	RoHS Compliant	RoHS Compliant	RoHS Compliant

Capacitive Products, Aluminium Electrolytic - Surface Mount

Product Type	85°C TYEV	105°C TYEH	Long Life TYEL	Low Impedance TYEE	Organic Conductive Polymer TYOH
					
Features	-40°C to +85°C	-40°C to +105°C	-40°C to +105°C	-55°C to +105°C	-55°C to +105°C
	4.0V to 100V DC	6.3V to 100V DC	6.3V to 50V DC	6.3V to 50V DC	2.5V to 25V DC
	2000 Hours Load Life	Up to 3000 Hours Load Life	3000 Hours Load Life	1000 Hours Load Life	2000 Hours Load Life
	0.1 to 6800µF Capacitance Range	0.1 to 6800µF Capacitance Range	0.1 to 1000µF Capacitance Range	1.0 to 220µF Capacitance Range	22 to 2700µF Capacitance Range
	7 Case Sizes	7 Case Sizes	6 Case Sizes	4 Case Sizes	7 Case Styles

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Colour Code in Accordance with IEC 62



Colour	1st Figure	2nd Figure	3rd Figure	Multiplier	Tolerance	
					Letter	Percent
Black	0	0	0	1		
Brown	1	1	1	10	F	±1%
Red	2	2	2	100	G	±2%
Orange	3	3	3	1,000		
Yellow	4	4	4	10,000		
Green	5	5	5	100,000	D	±0.5%
Blue	6	6	6	1,000,000	C	±0.25%
Violet	7	7	7	10,000,000	B	±0.1%
Grey	8	8	8	100,000,000		
White	9	9	9	1,000,000,000		
Gold				0.1	J	±5%
Silver				0.01	K	±10%
None					M	±20%

E Series Value Grid

E Series in accordance with IEC 63

E6	E12	E24	E96	E6	E12	E24	E96	E6	E12	E24	E96	E6	E12	E24	E96	E6	E12	E24	E96	E6	E12	E24	E96
100	100	100	100				147	220	220	220	215				316	470	470	470	464	680	680	680	681
			102	150	150	150	150				221	330	330	330	324				475				698
			105				154				226				332				487				715
			107			160	158				232				340				499				732
		110	110				162			240	237				348			510	511			750	750
			113				165				243			360	357				523				768
			115				169				249				365				536				787
	120	120	118				174				255				374				549		820	820	806
			121		180	180	178				261		390	390	383		560	560	562				825
			124				182		270	270	267				392				576				845
			127				187				274				402				590				866
		130	130				191				280				412				604				887
			133				196				287				422			620	619			910	909
			137			200	200				294			430	432				634				931
			140				205			300	301				442				649				953
			143				210				309				453				665				976

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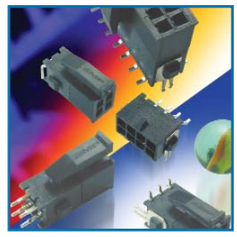
Associated Products



Alcoswitch Switches



Schrack PCB Relays



Amp Connectors



Power Resistors



Microdot
Connectors and Cables

Notes

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