



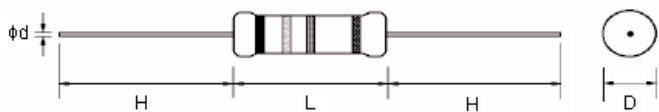
PART NO.

MCRE0000 Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Kiran	07/05/09	Suresh	07/05/09	Farnell	21/05/09

Dimension:



Dimensions : Millimetres

Type	Power Rating (W)	Maximum D	Maximum L	d ±0.05	H ±3
MC	1/8	1.85	3.5	0.45	28

Dimensions : Millimetres

Specifications:

- Resistance range : 1Ω to 1MΩ.
- Finished size : 1.85mm x 3.5mm.
- Lead wire diameter : 0.45 ±0.05mm.
- Pitch of tape (PT) : 52mm.

Ratings

Type	MC
Rated power	0.125W at 70°C
Maximum working voltage	200V
Maximum overload voltage	400V
Dielectric withstanding voltage	
Rated ambient temperature	70°C
Operating temperature range	-55 °C to +155°C
Resistance tolerance	±5%
Resistance range	1.1MΩ to 1MΩ

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

TOLERANCES:
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Kiran	07/05/09
CHECKED BY:	DATE:
Suresh	07/05/09
APPROVED BY:	DATE:
Farnell	21/05/09

DRAWING TITLE:			
1700197-1700277			
SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10002174	1700197-1700277_DWG	A
SCALE: NTS		U.O.M.: mm	SHEET: 1 OF 10



PART NO.

MCRE0000 Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Kiran	07/05/09	Suresh	07/05/09	Farnell	21/05/09

Power Rating:

Resistors shall have a power rating based on continuous full load operation at an ambient temperature of 70°C. For temperature in excess of 70°C, the load shall be derated.

Voltage Rating:

Resistors shall have a rated direct-current (DC) continuous working voltage or an approximate sine-wave root-mean-square (RMS) alternating-current (AC) continuous working voltage at commercial-line frequency and waveform corresponding to the power rating, as determined from the following formula :

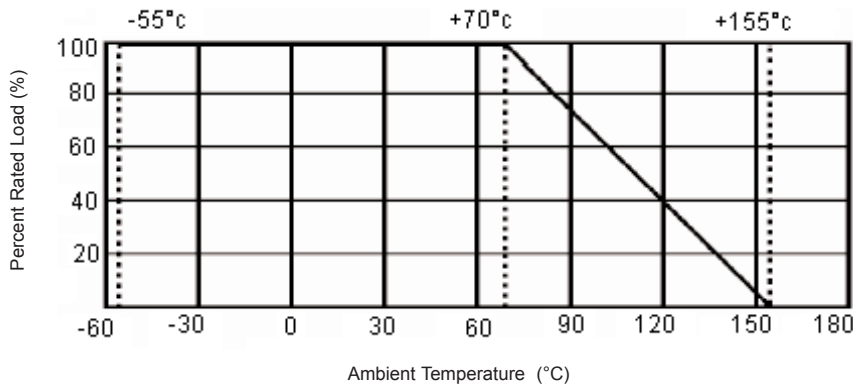
$$RCWV = \sqrt{P \times R}$$

Were: RCWV = Rated DC or RMS AC continuous working voltage at commercial-line frequency and waveform (volt)

P = Power rating (watt)

R = Nominal resistance (ohm)

In no case shall the rated DC or RMS AC continuous working voltage be greater than the applicable maximum value.



This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

TOLERANCES:
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY: Kiran	DATE: 07/05/09
CHECKED BY: Suresh	DATE: 07/05/09
APPROVED BY: Farnell	DATE: 21/05/09

DRAWING TITLE: 1700197-1700277			
SIZE A	DWG NO. M10002174	ELECTRONIC FILE 1700197-1700277_DWG	REV A
SCALE: NTS		U.O.M.: mm	SHEET: 2 OF 10



PART NO.

MCRE0000 Series

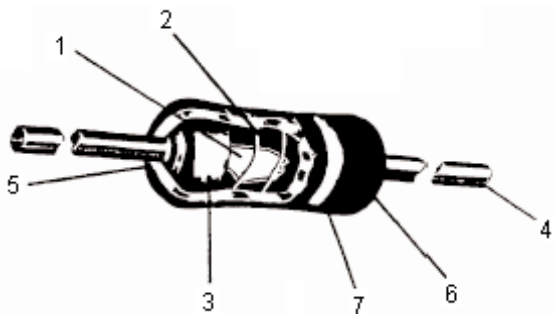
REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Kiran	07/05/09	Suresh	07/05/09	Farnell	21/05/09

Nominal Resistance:

Effective figures of nominal resistance shall be in accordance with E-24 series, and resistance tolerance

Construction:



Item Number	Name	Material
1	Basic body	Rod type ceramics
2	Resistance film	Carbon film
3	End cap	Steel (tin plated iron surface)
4	Lead wire	Annealed copper wire coated with tin
5	Joint	By welding
6	Coating	Insulated epoxy resin (colour: beige)
7	Colour code	Epoxy resin

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Kiran	07/05/09
CHECKED BY:	DATE:
Suresh	07/05/09
APPROVED BY:	DATE:
Farnell	21/05/09

DRAWING TITLE:

1700197-1700277

SIZE A	DWG NO. M10002174	ELECTRONIC FILE 1700197-1700277_DWG	REV A
SCALE: NTS		U.O.M.: mm	SHEET: 3 OF 10



PART NO.

MCRE0000 Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Kiran	07/05/09	Suresh	07/05/09	Farnell	21/05/09

Characteristics

Characteristics	Limits	Test Methods (JIS C 5201-1)	
DC resistance	Must be within the specified tolerance	The limit of error of measuring apparatus shall not exceed allowable range or 5% of resistance tolerance (Sub-clause 4.5)	
Insulation resistance	Insulation resistance 10,000MΩ minimum	Resistors shall be clamped in the trough of a 90° metallic V-block or foil method use a metal foil shall be wrapped closely around the body of the resistor. After that shall be tested at DC potential respectively specified in the above list for 60 +10/-0 seconds. (Sub-clause 4.6)	
Dielectric withstanding voltage	No evidence of flashover mechanical damage, arcing or insulation break down	Resistors shall be clamped in the trough of a 90° metallic V-block or foil method use a metal foil shall be wrapped closely around the body of the resistor. After that shall be tested at DC potential respectively specified in the above list for 60 +10/-0 seconds. (Sub-clause 4.7)	
Temperature coefficient	Resistance Range	Natural resistance change per temperature degree centigrade R2-R1/R1(t2-t1) x 10 ⁶ (PPM/°C) R1: Resistance value at room temperature (t1) R2: Resistance value at room temperature plus 100°C (t2) (Sub-clause 4.8)	
	≤10Ω		0 to ±350
	11Ω to 99K		0 to -450
	100K to 1M		0 to -700
Short time overload	TCR (PPM/°C)	Permanent resistance change after the application of a potential of 2.5 times RCWV for 5 seconds (Sub-clause 4.13)	
	1.1M to 10M		0 to -1500
Terminal strength	No evidence of mechanical damage	Direct load: Resistance to a 2.5kg direct load for 10 seconds in the direction of the longitudinal axis of the terminal leads. Twist test: Terminal leads shall be bent through 90° at a point of about 6mm from the body of the resistor and shall be rotated through 360° about the original axis of the bent terminal in alternating direction for a total of 3 rotations. (Sub-clause 4.16)	

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Kiran	07/05/09
CHECKED BY:	DATE:
Suresh	07/05/09
APPROVED BY:	DATE:
Farnell	21/05/09

DRAWING TITLE:			
1700197-1700277			
SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10002174	1700197-1700277_DWG	A
SCALE: NTS		U.O.M.: mm	SHEET: 4 OF 10



PART NO.

MCRE0000 Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Kiran	07/05/09	Suresh	07/05/09	Farnell	21/05/09

Characteristics

Characteristics	Limits	Test Methods (JIS C 5201-1)															
Solderability	95% coverage minimum	The area covered with a new, smooth clean, shiny and continuous surface free from concentrated pinholes. Test temperature of solder : 245°C ±3°C Dwell time in solder : 2 to 3 seconds (Sub-clause 4.17)															
Soldering temperature reference	Electrical characteristics shall be satisfied. Without distinct deformation in appearance. (95% coverage minimum)	The leads immersed into solder bath to 3.2 to 4.8mm from the body. Permanent resistance change shall be checked. Wave soldering condition: (2 cycles maximum) Pre-heat : 100 to 120°C, 30 ±5 seconds. Suggestion solder temperature : 235 to 255°C, 10 seconds maximum Park temperature : 260°C Hand soldering condition: Hand Soldering bit temperature : 380 ±10°C Dwell time in solder : 3 +1/-0 seconds															
Resistance to soldering heat	Resistance change rate is ±(1% + 0.05Ω) maximum with no evidence of mechanical damage	Permanent resistance change when leads immersed to 3.2 to 4.8 mm from the body in 350°C ±10°C solder for 3 ±0.5 seconds (Sub-clause 4.18)															
Temperature cycling	Resistance change rate is ±(1% + 0.05Ω) maximum with no evidence of mechanical damage	Resistance change after continuous 5 cycles for duty shown below: <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-55°C ±3°C</td> <td>30 minutes</td> </tr> <tr> <td>2</td> <td>Room temperature</td> <td>10 to 15 minutes</td> </tr> <tr> <td>3</td> <td>155°C ±2°C</td> <td>30 minutes</td> </tr> <tr> <td>4</td> <td>Room temperature</td> <td>10 to 15 minutes</td> </tr> </tbody> </table> (Sub-clause 4.19)	Step	Temperature	Time	1	-55°C ±3°C	30 minutes	2	Room temperature	10 to 15 minutes	3	155°C ±2°C	30 minutes	4	Room temperature	10 to 15 minutes
Step	Temperature	Time															
1	-55°C ±3°C	30 minutes															
2	Room temperature	10 to 15 minutes															
3	155°C ±2°C	30 minutes															
4	Room temperature	10 to 15 minutes															

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

TOLERANCES:
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Kiran	07/05/09
CHECKED BY:	DATE:
Suresh	07/05/09
APPROVED BY:	DATE:
Farnell	21/05/09

DRAWING TITLE:			
1700197-1700277			
SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10002174	1700197-1700277_DWG	A
SCALE: NTS		U.O.M.: mm	SHEET: 5 OF 10



PART NO.

MCRE0000 Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Kiran	07/05/09	Suresh	07/05/09	Farnell	21/05/09

Characteristics

Characteristics	Limits	Test Methods (JIS C 5201-1)						
Vibration	Resistance change rate is $\pm(1\% + 0.05\Omega)$ maximum	55Hz, 3 planes 2 hours each Total amplitude = 1.5mm (Sub-clause 4.22)						
Load life in humidity	<table border="1"> <thead> <tr> <th>Resistance Value</th> <th>$\Delta R/R$</th> </tr> </thead> <tbody> <tr> <td>Normal Type</td> <td>$\pm 3\%$</td> </tr> <tr> <td></td> <td>$\pm 5\%$</td> </tr> </tbody> </table>	Resistance Value	$\Delta R/R$	Normal Type	$\pm 3\%$		$\pm 5\%$	Resistance change after 1000 hours operating at RCWV with duty cycle of (1.5 hours "on", 0.5 hour "off") in a humidity test chamber controlled at $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and 90 to 95% relative humidity (Sub-clause 4.24.2.1)
Resistance Value	$\Delta R/R$							
Normal Type	$\pm 3\%$							
	$\pm 5\%$							
Load life	<table border="1"> <thead> <tr> <th>Resistance Value</th> <th>$\Delta R/R$</th> </tr> </thead> <tbody> <tr> <td>Normal Type</td> <td>$\pm 2\%$</td> </tr> <tr> <td></td> <td>$\pm 3\%$</td> </tr> </tbody> </table>	Resistance Value	$\Delta R/R$	Normal Type	$\pm 2\%$		$\pm 3\%$	Permanent resistance change after 1000 hours operating at RCWV with duty cycle of (1.5 hours "on", 0.5 hour "off") at $70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ambient (Sub-clause 4.25.1)
Resistance Value	$\Delta R/R$							
Normal Type	$\pm 2\%$							
	$\pm 3\%$							
Resistance to solvent	No deterioration of protective coatings and markings	Specimens shall be immersed in a bath of trichloroethane completely for 3 minutes with ultrasonic (Sub-clause 4.30)						

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Kiran	07/05/09
CHECKED BY:	DATE:
Suresh	07/05/09
APPROVED BY:	DATE:
Farnell	21/05/09

DRAWING TITLE:

1700197-1700277

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10002174	1700197-1700277_DWG	A
SCALE: NTS	U.O.M.: mm	SHEET: 6 OF 10	



PART NO.

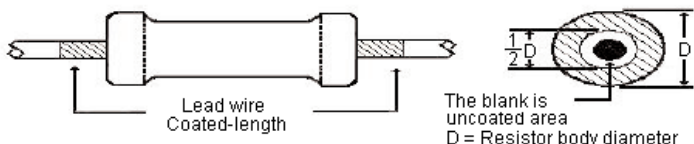
MCRE0000 Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Kiran	07/05/09	Suresh	07/05/09	Farnell	21/05/09

Painting Method:

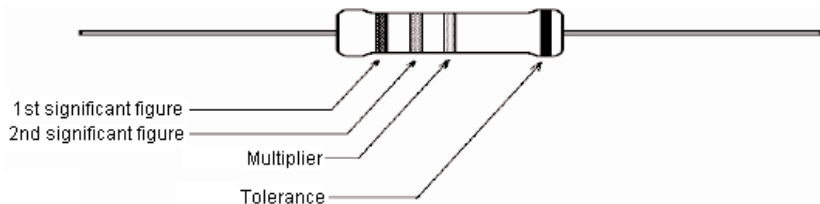
Welding point, terminal and lead wire, is permissible to be exposed without the outer coated cover. The extent should be within 1/2 of the angle.



Marking:

Resistor:

Resistor shall be marked with colour coding, colours shall be in accordance with JIS C 0802.



Specification Table

Description	Wattage (mW)	Resistance Value	Part Number
Carbon Film Resistor	125	1R	MCRE000001
		1R2	MCRE000002
		1R5	MCRE000003
		1R8	MCRE000004
		2R2	MCRE000005

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Kiran	07/05/09
CHECKED BY:	DATE:
Suresh	07/05/09
APPROVED BY:	DATE:
Farnell	21/05/09

DRAWING TITLE:

1700197-1700277

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10002174	1700197-1700277_DWG	A
SCALE: NTS		U.O.M.: mm	SHEET: 7 OF 10



PART NO.

MCRE0000 Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Kiran	07/05/09	Suresh	07/05/09	Farnell	21/05/09

Specification Table

Description	Wattage (mW)	Resistance Value	Part Number
Carbon Film Resistor	125	2R7	MCRE000006
		3R3	MCRE000007
		3R9	MCRE000008
		4R7	MCRE000009
		5R6	MCRE000010
		6R8	MCRE000011
		8R2	MCRE000012
		10R	MCRE000013
		12R	MCRE000014
		15R	MCRE000015
		18R	MCRE000016
		22R	MCRE000017
		27R	MCRE000018
		33R	MCRE000019
		39R	MCRE000020
		47R	MCRE000021
		56R	MCRE000022
		68R	MCRE000023
82R	MCRE000024		
100R	MCRE000025		
120R	MCRE000026		

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Kiran	07/05/09
CHECKED BY:	DATE:
Suresh	07/05/09
APPROVED BY:	DATE:
Farnell	21/05/09

DRAWING TITLE:

1700197-1700277

SIZE A	DWG NO. M10002174	ELECTRONIC FILE 1700197-1700277_DWG	REV A
SCALE: NTS	U.O.M.: mm	SHEET: 8 OF 10	



PART NO.

MCRE0000 Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Kiran	07/05/09	Suresh	07/05/09	Farnell	21/05/09

Specification Table

Description	Wattage (mW)	Resistance Value	Part Number
Carbon Film Resistor	125	150R	MCRE000027
		180R	MCRE000028
		220R	MCRE000029
		270R	MCRE000030
		330R	MCRE000031
		390R	MCRE000032
		470R	MCRE000033
		560R	MCRE000034
		680R	MCRE000035
		820R	MCRE000036
		1K	MCRE000037
		1K2	MCRE000038
		1K5	MCRE000039
		1K8	MCRE000040
		2K2	MCRE000041
		2K7	MCRE000042
		3K3	MCRE000043
		3K9	MCRE000044
4K7	MCRE000045		
5K6	MCRE000046		
6K8	MCRE000047		

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

TOLERANCES:
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY: Kiran	DATE: 07/05/09
CHECKED BY: Suresh	DATE: 07/05/09
APPROVED BY: Farnell	DATE: 21/05/09

DRAWING TITLE: 1700197-1700277			
SIZE A	DWG NO. M10002174	ELECTRONIC FILE 1700197-1700277_DWG	REV A
SCALE: NTS		U.O.M.: mm	SHEET: 9 OF 10



PART NO.

MCRE0000 Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Kiran	07/05/09	Suresh	07/05/09	Farnell	21/05/09

Specification Table

Description	Wattage (mW)	Resistance Value	Part Number
Carbon Film Resistor	125	8K2	MCRE000048
		10K	MCRE000049
		12K	MCRE000050
		15K	MCRE000051
		18K	MCRE000052
		22K	MCRE000053
		27K	MCRE000054
		33K	MCRE000055
		39K	MCRE000056
		47K	MCRE000057
		56K	MCRE000058
		68K	MCRE000059
		82K	MCRE000060
		100K	MCRE000061
		120K	MCRE000062
		150K	MCRE000063
		180K	MCRE000064
220K	MCRE000065		
270K	MCRE000066		
330K	MCRE000067		
390K	MCRE000068		

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

TOLERANCES:
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY: Kiran	DATE: 07/05/09
CHECKED BY: Suresh	DATE: 07/05/09
APPROVED BY: Farnell	DATE: 21/05/09

DRAWING TITLE: 1700197-1700277			
SIZE A	DWG NO. M10002174	ELECTRONIC FILE 1700197-1700277_DWG	REV A
SCALE: NTS		U.O.M.: mm	SHEET: 10 OF 10



PART NO.

MCRE0000 Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Kiran	07/05/09	Suresh	07/05/09	Farnell	21/05/09

Specification Table

Description	Wattage (mW)	Resistance Value	Part Number
Carbon Film Resistor	125	470K	MCRE000069
		560K	MCRE000070
		680K	MCRE000071
		820K	MCRE000072
		1M	MCRE000073

<http://www.farnell.com>

<http://www.newark.com>

<http://www.cpc.co.uk>

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

**TOLERANCES:
UNLESS OTHERWISE
SPECIFIED,
DIMENSIONS ARE
FOR REFERENCE
PURPOSES ONLY.**

DRAWN BY: Kiran	DATE: 07/05/09
CHECKED BY: Suresh	DATE: 07/05/09
APPROVED BY: Farnell	DATE: 21/05/09

DRAWING TITLE: 1700197-1700277			
SIZE A	DWG NO. M10002174	ELECTRONIC FILE 1700197-1700277_DWG	REV A
SCALE: NTS		U.O.M.: mm	SHEET: 11 OF 10