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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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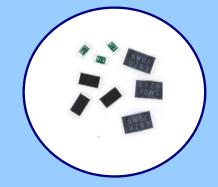
# SERIES 73M1A, 73M2A, 73M3x & 73M5



#### CURRENT SENSING RESISTORS - UP TO 5W POWER

#### **FEATURES**

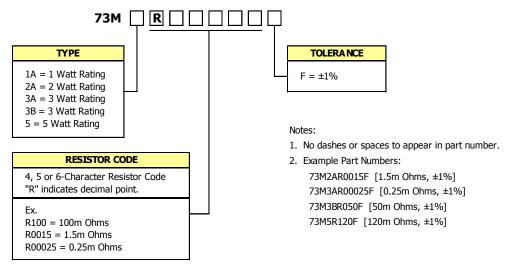
- Metal Plate Construction Copper Alloy
- Power Rating @ +70°C, Options 1 5 Watts
- Resistance Range, 0.25 120 milliohms
- Operating Temperature to +155°C
- EIA Standard Package Sizes
- Terminal Finish Tin (e3)
- Reflow capable per JEDEC J-STD-020, 260°C maximum
- Tape and Reel Packaging
- RoHS/Green Compliant [6/6]



#### **APPLICATIONS**

Ideal for applications such as current detection and limiting, regulated battery circuits, motor control, power supply, hard disk drives, inverter/converter, industrial equipment and automotive.

#### **ORDERING INFORMATION**



Not all performance combinations and resistor values may be available. Contact your local CTS Representative or CTS Customer Service for availability.

#### STANDARD RESISTOR VALUES

Standard Resistance Values [Based on EIA E-24 Sequence]

4, 5, 6-Digit Codes

Resistor	Resistor	Resistor	Resistor	Resistor	Resistor	Resistor	Resistor
Value	Code	Value	Code	Value	Code	Value	Code
$0.00025\Omega$	R00025	$0.0090\Omega$	R009	$0.0300\Omega$	R030	$0.0820\Omega$	R082
$0.00050\Omega$	R0005	$0.0100\Omega$	R010	0.0330Ω	R033	$0.0910\Omega$	R091
$0.0010\Omega$	R001	$0.0110\Omega$	R011	$0.0360\Omega$	R036	$0.1000\Omega$	R100
0.0015Ω	R0015	$0.0120\Omega$	R012	$0.0390\Omega$	R039	$0.1100\Omega$	R110
$0.0020\Omega$	R002	$0.0130\Omega$	R013	$0.0430\Omega$	R043	$0.1200\Omega$	R120
0.0025Ω	R0025	$0.0150\Omega$	R015	0.0470Ω	R047		
$0.0030\Omega$	R003	$0.0160\Omega$	R016	$0.0500\Omega$	R050		
0.0040Ω	R004	$0.0180\Omega$	R018	$0.0510\Omega$	R051		
$0.0050\Omega$	R005	$0.0200\Omega$	R020	$0.0560\Omega$	R056		
0.0060Ω	R006	$0.0220\Omega$	R022	$0.0620\Omega$	R062		
0.0070Ω	R007	$0.0240\Omega$	R024	$0.0680\Omega$	R068		
0.0080Ω	R008	0.0270Ω	R027	0.0750Ω	R075		

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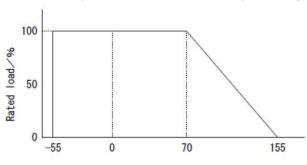
CURRENT SENSE RESISTOR - UP TO 5W POWER

#### **ELECTRICAL CHARACTERISTICS**

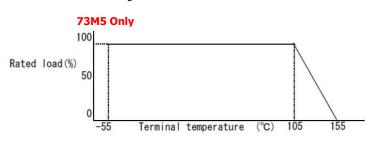
Туре	Rated Wattage [Watts]	Resistance [mΩ]	Tolerance [%]	T.C.R [ppm/°C]	Rated Ambient Temperature	Operating Temperature Range
73M1A	1	1 - 50	±1	R $\geq$ 0.010Ω: ±50 R < 0.010Ω: ±100	+70°C	-55°C to +155°C
73M2A	2	1 - 75	±1	R < 0.010Ω: $\pm 100$ R $\geq 0.010Ω$ : $\pm 50$	+70°C	-55°C to +155°C
73M3A	3	0.25 - 3	±1	R ≤ $0.001\Omega$ : ±200 R > $0.001\Omega$ : ±100	+70°C	-55°C to +155°C
73M3B	3	4 - 100	±1	±50	+70°C	-55°C to +155°C
73M5	5	1 - 120	±1	R < $0.010\Omega$ : ±100 R ≥ $0.010\Omega$ : ±50	+70°C	-55°C to +155°C

#### **DERATING CURVE**

Rated wattage is the maximum continuous power applicable at ambient temperature from -55°C to +70°C [73M5: -55°C to +105°C]. For ambient temperature above +70°C [+105°C], power rating is in accordance with Derating Curves below.

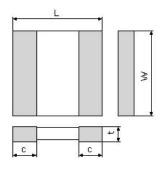


Ambient temperature/°C



#### **PACKAGE DRAWING**

Dimensions [mm]	L	w	t	С	Resistance [mΩ]	
73M1A	3.2 ±0.3	1.6 ±0.3	0.6 ±0.3	0.5 ±0.3		
73M2A	6.3 ±0.3	3.2 ±0.3	$0.8 \pm 0.3$	$1.9 \pm 0.3$	1.0 - 4.0	
7314ZA	0.3 ±0.3	3.2 ±0.3	0.6 ±0.3	1.1 ±0.3	4.1 - 75	
	6.8 ±0.3	6.5 ±0.3	1.3 Max.		0.25, 0.50	
			1.4 Max.	$2.2 \pm 0.3$	1.0	
73M3A			1.3 Max.		1.5	
/3143A				1.8 ±0.3	2.0	
				1.2 Max.	1.6 ±0.3	2.5
				1.3 ±0.3	3.0	
73M3B	6.7 ±0.3	7.2 ±0.3	1.3 Max.	1.1 ±0.3		
73M5	11.4 ±0.3	6.9 ±0.3	1.8 Max.	3.2 ±0.3	1.0 - 5.0	
/ SIMIS	11.4 ±0.3	0.9 ±0.3	T.O Max.	1.8 ±0.3	5.1 - 120	

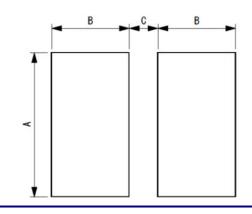


#### **NOTES**

Terminal:
 Base Metal - Copper [Cu].
 Barrier Plating - Nickel [Ni].
 Finish Plating - Matte Tin [Sn].

#### **RECOMMENDED LAND PATTERN**

Туре		nensio [mm]	Resistance [mΩ]	
	A B C		[11132]	
73M1A	2.1	1.4	1.6	
73M2A	27	2.8	1.9	1.0 - 4.0
/3MZA	3.7	2.0	3.5	4.1 - 75
	7.1	3.8	1.4	0.25 - 1.5
73M3A		3.4	2.2	2.0
/SIMSA		3.2	2.6	2.5
		2.9	3.2	3.0
73M3B	7.8	2.7	3.5	
72145	7.5	4.8	4.0	1.0 - 5.0
73M5	7.5	3.4	6.8	5.1 - 120



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CURRENT SENSE RESISTOR - UP TO 5W POWER

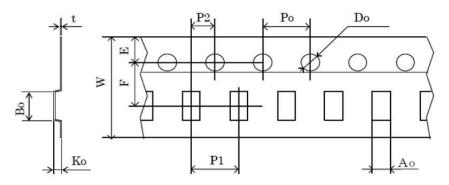
### **PACKAGING INFORMATION**

#### **MARKING**

Туре	Part Marking							
73M1A	Rxxx = "R" is the decimal point and 3 digits [E24] are significant values. See resistor tables for codes.	Rxxx = "R" is the decimal point and 3 digits [E24] are significant values. See resistor tables for codes.						
72M2A	Rxxx = "R" is the decimal point and 3 digits [E24] are significant values. See resistor tables for codes.	73M3x	Rxxx = "R" is the decimal point and 3 digits [E24] are significant values. See resistor tables for codes.					
73M2A -	Nominal resistances that includes a decimal point; marking is denoted by "m" expressing a decimal point in milliohms and three digits. Ex. 1m50 [1.5m Ohms]		Nominal resistances that includes a decimal point; marking is denoted by "m" expressing a decimal po in milliohms and three digits. Ex. 0m25 [0.25m Ohr					

#### **EMBOSSED TAPE**

Туре	w	P1	E	F	Do	PO	P2	Ao	Во	Ко	t
73M1A	8.00 ±0.15	4.00 ±0.10		3.50 ±0.10	5.50 ±0.10 1.55 ±0.05 5.50 ±0.10 1.50 ±0.05	1.55 ±0.05		1.83 ±0.10	3.48 ±0.10	0.90 ±0.10	0.20 ±0.05
73M2A	12.00 ±0.15	4.00 ±0.10		5.50 ±0.10				3.50 ±0.10	6.74 ±0.10	1.10 ±0.10	0.20 ±0.05
73M3A	12.00 ±0.15	8.00 ±0.10	1.75 ±0.10	5.50 ±0.10		4.00 ±0.10	2.00 ±0.10	6.75 ±0.10	7.15 ±0.10	1.70 ±0.10	0.25 ±0.05
73M3B	12.00 ±0.15	12.00 ±0.10		5.50 ±0.10				7.70 ±0.10	7.15 ±0.10	1.20 ±0.10	0.25 ±0.05
73M5	24.00 ±0.30	12.00 ±0.10		11.50 ±0.10	1.55 ±0.05			7.20 ±0.10	11.80 ±0.10	1.70 ±0.10	0.30 ±0.10



#### REEL

[mm]

Туре	Quantity Per Reel	w	М	A	В	С	D
73M1A	4,000	12.0 ±0.5		2.0 ±0.5	13.2 ±0.5	21.7 ±0.5	
73M2A	4,000	16.2 ±0.5	178 ±1.0				
73M3A	1,000	16.2 ±0.5					60.0 ±0.5
73M3B	1,000	16.2 ±0.5		2.5 ±0.6	13.5 ±0.6	21.9 ±0.6	00.0 ±0.5
73M5	500	24.4 +2.0					
7 51 15	300	-0.0					

