FrelTec GmbH

Mathildenstr. 10A 82319 Starnberg Germany

Chip Resistor, Shunt SMD

SMD SPECIFICATION Part Number

Chip Shunt Resistor

04H	0632*	M200*	J*		T05*	E	2B	MA
Туре	Size	Value	Toler- ance		Packing	TCR	Power Rating	Material Code
04H : SMD Chip Resistor Shunt	0632 : 6,4x3,2	The last digit is the multiplier	J : ±5%		L04: Tape and Reel for 4k pc (13"reel) for 0632 size, Embossed Tape	E: ±50ppm/°C	2B: 2,5W	MA: Manga- nin
	1052 : 10,0x5, 2	which denotes the number of zero following	F : ±1%		L02: Tape and Reel for 2k pc (13"reel) for 1052, 1575 size, Emb- ossed Tape	O: ±75ppm/°C	03: 3W	FC: FeCrAl
	1575 : 15,0x7, 5					F : ±100ppm/° C	04: 4W	KA: Karma
		Example: M200 = 0,2mOhm				X : 150ppm/°C	05: 5W	
		97R6=					06: 6W	
		1M10 = 1mOhm	₽₹ A				07: 7W	
				-			08: 8W	
						* not all combination is possible	09: 9W	
							10: 10W	
							12: 12 W	
							15: 15W	

All products according to RoHS (2015/863/EU)

SMD Construction and Dimension 0630:

Chip Shunt Resistor



SMD Power Derating Curve

Chip Shunt Resistor

For resistors operated in ambient temperatures above 70 °C , power rating shall be derated in accordance with figure below, Operating Temperature Range : -55°C 175°C



SMD Electrical Specification

Chip Shunt Resistor

Size Power		Material	Resistance	TCR (PPM/°C)		
			0.3, 0.35	+150		
	6W	Manganin	0.7.0	+100		
	5W		2)		
	4W		3	}		
0000	3W	FeCrAl	4		±30	
0632	2,5W		5			
	5W		2)		
	4W	Karma	2,5	2,5, 3		
	3W	r\allia	4	4		
	2,5W		5	5		
	12W		0,	2		
	10W		0,	3		
	9W	Manganin	0,4,	0,5	±100	
	8W		0,7,	0,8		
	7W					
	8W		1			
	7W		1,			
1052	6W	FeCrAl	2		±50	
	5W		3			
	4W		4			
	3W)		
	870					
	6VV		2		. 75	
	500	Karma	3	} ▼	±/5	
	400		2			
	3VV 15\//))		
	101/			2,	+150	
	9\//	Manganin	0,	3 1	1100	
	8W	Iviangamin	0,	5		
	7W			75 0 8	±100	
1575	9W		1			
	8W	FeCrAl	1	+50		
	7W		2.			
	9W		 1			
	7W	Karma	2,	±75		
			· ·			

Chip Shunt Resistor

SMD SPECIFICATION *Tape And Reel Package*





Туре	М	В	D	W
0632				17,50±0,5
1052	330±2	13,5±0,5	60±1	25,0±0,5
1575				33,0±0,5

Stock period

The performance of these products, including the solderability, is guaranteed for 12 months, provided that they remain packed as they were when delivered and stored at a temperature of $25^{\circ}C \pm 3^{\circ}C$ and a relative humidity less than 80%RH

Recommended Land Pattern Design (mm):



Size	а	b	C
0632	3,60	1,80	3,80
1052	6,20	2,70	5,60
1575	8,75	5,20	5,60

SMD Environmental Characteristics

Chip Shunt Resistor

Item	Requirement	Test Method				
Thermal shock	Within the specified value	IEC60115-14.8 Measured value -55°C and +125°C, reference value +20°C				
Solderability	No visible damage, weldable area 95% minimum	EC60115-14.17 245°C Tin slot, hold for 3 sec				
Short time overload	No visible damage, ΔR±0,5% maximum	IEC60115-14.13 2.5 times rated voltage, 5 sec				
Resistance to solder heat	No visible damage, ΔR±0,5% maximum	IEC60115-14.18 27°C Tin bath, hold for 10 sec				
High temperature and humidity	No visible damage, ΔR±1,0% maximum	AEC-Q200 Test 7 MIL-SRD-202 Method 103 Temperature 85°C, humidity 85% of the conditions applied 10% of the rated power (current) or component limit current (whichever is less), for 1000 hours				
High temperature storage	No visible damage, ΔR±1,0% maximum	IEC60115-14.25.3 1000 hrs @ 170°C, without load				
Low temperature load	No visible damage, ΔR±0,5% maximum	IEC60115-14.36 -55°C, No load for one hour, rated voltage load for 45 min, no load for 15 min				
Temperature cycling	No visible damage, ΔR±0,5% maximum	IEC60115-14.19 -55°C @ 30 min ~ room temperature @ <5 min ~ +155°C @ 30 min, 500 cycles				
Load life	No visible damage, ΔR±1,0% maximum	IEC60115-14.25.1 1000 h @ 70±2°C, rated voltage, 90 min on, 30 min off				

SMD

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