By Category PDF

Category Resistors

Passive Devices



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Resistors Quick Reference of Package Size

Shunt Resistors

High Power Metal Plate Shunt Resistors lineup

Size mm	D. (N)	Terminal type	Attached type	Sp	ecificat	ion	Resistance	Rated Power (W)	Printing
(inch)	Part No.	Wide Terminal	Attached	General- purpose	Ultra-low resistance	High Power	Range (mΩ)	(Rated Terminal Temperature)	Page
5025 (2010)	GMR50				~	~	5 to 220	4 (90°C), 3 (110°C)	P.230
							☆0.2	12 (120°C)	
	000100						0.3, 0.5, 1	8 (75°C), 4 (140°C)	D 000
6432 (2512)	PSRIUU					~	2	6 (75°C), 4 (140°C)	P.220
							3	4 (75°C), 3 (140°C)	
1	ew GMR100				\checkmark	\checkmark	5 to 220	7 (70°C), 5 (110°C)	P.230
							0.1	15 (120°C)	
6464 (2525)	☆PSR330				arphi	\checkmark	0.5	8 (100°C)	P.228
							1	6 (100°C)	
7142 (2817)	GMR320				\checkmark	\checkmark	5 to 100	10 (70°C), 7 (110°C)	P.230
7.9×5.6 (3222) 🚺	lew PSR350				\checkmark	\checkmark	0.27	12 (120°C)	P.229
							0.2	12 (75°C), 5 (130°C)	
							5 to 100 10 (70°C), 7 (110°C) 0.27 12 (120°C) 0.2 12 (75°C), 5 (130°C) 0.3, 0.5 10 (75°C), 5 (130°C) 1 8 (75°C), 5 (130°C) 0 7 (145°C)		
10×5.2 (3921)	PSR400				arepsilon	\checkmark	0.2 12 (75°C), 5 (130°C) 0.3, 0.5 10 (75°C), 5 (130°C) 1 8 (75°C), 5 (130°C)		P.228
							2	6 (75°C), 4 (115°C)	
							3	5 (70°C), 3 (115°C)	
							0.1, 0.2	15 (75°C), 10 (120°C)	
15,775 (5021)	DSD200						0.3, 0.4, 0.5	10 (75°C), 7 (120°C)	B 220
15×1.15 (5931)	PSR500				~	~	1	10 (75°C), 6 (120°C)	F.220
							2	7 (70°C), 4 (115°C)	
								☆: Under Deve	elopment

Metal Plate Shunt Resistors lineup

Sizo mm		Terminal tune	Attached type	Sp	Specification		Resistance	Roted Dower	Drinting
(inch)	Part No.	Wide Terminal	Reverse Attached	General- purpose	Ultra-low resistance	High Power	Range (mΩ)	(W)	Page
1005 (0402)	PMR01				V		10	0.2	P.231
1608 (0603)	PMR03				~		10	0.25	P.231
0010 (0005)	DMD40						2	1	D 001
2012 (0805)	PINIKIU						3 to 10	0.5	P.231
1220 (0508)	PML10	~			V		1 to 2.5	0.66	P.232
2016 (1006)	DMD10						1, 2	1.5	D 021
3210 (1200)	PIVITIO						3 to 10	1	P.231
1632 (0612)	PML18	~			~		0.5 to 2.5	1	P.232
0005 (1010)	DMDOS						1	2	D 001
3225 (1210)	PIVIEZO						2 to 5	1	P.231
E00E (0010)	DMD50						1, 2	2	D 021
5025 (2010)	PIVINDU						3 to 10	1	P.231
2550 (1020)	PML50	~			V		0.5, 2.2	2	P.232
6420 (0510)	DMD100						1, 2	3	D 021
6432 (2512)	PIVIEIUU						3 to 10	2	P.231
2064 (1005)	DMI 100						0.5	2	D 020
3204 (1225)	PIVILIUU						1 to 2.2	3 (25°C), 2 (70°C)	P.232

Thick Film Shunt Resistors lineup

Size mm		Terminal type	Attached type	Sp	ecificat	ion	Resistance	Bated Power	Printing
(inch)	Part No.	Wide Terminal	Reverse Attached	General- purpose	Ultra-low resistance	High Power	Range (mΩ)	(W)	Page
0603 (0201)	UCR006		~				100 to 910	0.1	P.234
1005 (0402)	UCR01		~				68 to 910	0.125	P.234
1609 (0603)							20 to 200	0.25	D 024
1608 (0603)	UCHUS						220 to 910	0.2	P.234
2012 (0805)	UCR10		~				11 to 100	0.33	P.234
2012 (0805)	Wew MCR10L			~		~	47 to 910	0.5	P.235
1220 (0508)	Vew LTR10L	~				~	33 to 910	1	P.233
	110010						11 to 39	1	D 024
3216 (1206)	UCHIO						43 to 100	0.5	P.234
	Wew MCR18L			V		~	47 to 910	0.75	P.235
1632 (0612)	LTR18	~				~	10 to 1000	<i>New</i> /1.5	P.233
2550 (1020)	LTR50	~				~	10 to 910	2	P.233
2064 (1005)	LTR100L	~				~	10 to 91	4	P.233
3264 (1225)	LTR100	~				~	100 to 910	2/☆3	P.233

☆: Under Development



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Resistors Quick Reference of Package Size

Thick Film Chip Resistors (Standard series/High Reliability series)

Thick Film Chip Resistors (Standard series/High Reliability series) lineup

	· · · · · · · · · · · · · · · · · · ·			Specification			-	-					
Size mm (inch)	Part No.	RASMID™ package	Terminal type Wide Terminal	General- purpose	Tolerance for Sulfurization	Anti-surge	High Anti-surge	High Power	High Voltage Resistance	Resistance Range (Ω)	Rated Power (W)	Printing Page	
03015 (009005)	SMR003	~								10 to 1M	0.02	P.245	
0402 (01005)	MCR004			V						1 to 3M	0.031 (1/32)	P.242	
0603 (0201)	MCR006			V						1 to 10M	0.05	P.242	
	ESR01					~				1 to 10M	0.2	P.236	
1005 (0400)	SFR01				~					1 to 10M	0.063 (1/16)	P.240	
1005 (0402)	MCR01S			V				V		1 to 10M	0.1	P.241	
	MCR01			~						1 to 10M	0.063 (1/16)	P.242	
	SDR03						~			1 to 10M	0.3/ <mark>//<i>ew</i>/</mark> 0.33 (1/3)/☆0.4	P.236	
	ESR03					~				1 to 10M	0.25/☆0.33 (1/3)	P.236	
1000 (0000)	KTR03								~	1 to 10M	0.1	P.239	
1608 (0603)	SFR03				~					1 to 10M	0.1	P.240	
	MCR03S			~				V		1 to 10M	0.125	P.241	
	MCR03			~						1 to 10M	0.1	P.242	
	SDR10						~			1 to 10M	0.5/☆0.66 (2/3)	P.236	
	ESR10					~				1 to 10M	0.4/☆0.5	P.236	
	KTR10								~	1 to 30M	0.125	P.239	
2012 (0805)	SFR10				~					1 to 10M	0.125	P.240	
	MCR10S			~				V		1 to 10M	0.25	P.241	
	MODIA									10 to 2.2M	0.125	D 040	
	MCR10	MONTO									1 to 10M	0.1	P.242
1220 (0508)	LTP10									1 to 976	New 1	P 029	
1220 (0508)	LINIU									1k to 1M	0.25	F.230	
	ESR18					~				1 to 10M	0.5/☆0.66 (2/3)	P.236	
	KTR18								~	1 to 10M	0.25	P.239	
2216 (1206)	SFR18				~					1 to 10M	0.25	P.240	
3210 (1200)	MCR18S			~				V		1 to 10M	0.4	P.241	
	MCD19									10 to 2.2M	0.25	D 040	
	WICHTO									1 to 10M	0.125	P.242	
1620 (0610)	17010									1 to 976	New 1.5	D 029	
1632 (0612)	LINIO									1k to 1M	0.75	P.230	
	ESR25					V				1 to 10M	0.66 (2/3)/☆0.75	P.236	
3225 (1210)	KTR25								~	1 to 10M	0.33 (1/3)	P.239	
	SFR25				V					1 to 1M	0.5	P.240	
5025 (2010)	☆MCR50S			V				V		1 to 10M	1.5	P.241	
2550 (1020)	LTR50		~			~		V		1 to 1M	1/☆2	P.238	
3264 (1225)	LTR100		~			~		~		1 to 1M	2/☆3	P.238	

◎RASMID[™]: ROHM's proprietary new method that enables superior dimensional precision, making it possible to develop the ultra-compact products. RASMID[™] is a trademark or a registered trademark of ROHM Co., Ltd.

☆: Under Development

For Current Detection High Power Metal Plate Shunt Resistors <Ultra Low ohmic> (PSR series)

 High power 3 	W to 15W							
Ultra low resi Excellent TCI	stance rage	(0.1m Ω or n	nore).					
		51105					\checkmark	
 Convex struct 	ture			PSR100		PSR330	PSR400	PSR500
Rated power	[.] up PSR ser	ies						
Part No.	Size Code mm (inch)	Rated (V (Rated Termina Low temperature side	Power V) al Temperature) High temperature side	Tolerance	Temperature* Coefficient (ppm/°C)	Resistance Value (mΩ)	Operating Temperature (°C)	Automotive Grade AEC-Q200
		12 (120°C)		-	150±50	☆0.2	_	
PSR100	PSR100 6432 (2512)		4 (140°C)	F (±1%)	0 to +100 0 to +100	0.5	-	YES
		6 (75°C) 4 (75°C)	4 (140°C) 3 (140°C)		0 to +50 0 to +50	2.0	-	
	0404	15 (1	20°C)		100±50	0.1	1	
☆PSR330	6464 (2525)	8 (1	8 (100°C)		0 to +100	0.5]	YES
	(2020)	6 (1	00°C)		0 to +50	1.0		
		12 (75°C)	5 (130°C)	_	125±50	0.2	_	
		10 (75°C)	5 (130°C)		0 to +100	0.3	-65 to +175	
PSR400	10×5.2	10 (75°C)	5 (130°C)	F (±1%)	0 to +100	0.5	-	YES
	(3921)	8 (75°C)	5 (130°C)		0 to +/5	1.0	-	
		6 (75°C)	4 (115°C)	_	0 to +/5	2.0	4	
		5 (70 C)	3 (115 C)		0 t0 +/5	3.0	-	
		15 (75 C)	10 (120 C)	_	200±50	0.1	-	
		10 (75 C)	TU (120 C)	_	0 to +150	0.2	-	
DODEOO	15×7.75		7 (120 C)	E (110/)	0 to +150	0.3	-	VEC
PSR500	(5931)	5931) 10 (75°C) 7 (1)		F (±1%)	0 to +150	0.4	-	TES
		10 (75°C)	6 (120°C)		0 to +75	1.0	-	
		7 (70°C)		-	0 to +75	2.0	-	
*(+20°C to +175°C)		. (. (2.00		1	

*(+20°C to +175°C)

Dimensions (Unit: mm)

Part No.	Resistance (mΩ)	L	w	t	н	b	
	0.2			1.80±0.15			
	0.3			1.45±0.15			
DED100	0.5	6 25 . 0 15	3.05±0.25	1.15±0.15	0.25.0.15	1 10.0 2	
PSRIDU	1.0	0.00±0.10		0.75±0.15	0.35±0.15	1.12±0.3	
	2.0			1.00±0.15			
	3.0			0.75±0.15			
	0.1			1.81±0.15			
PSR330	0.5	6.35±0.15	6.35±0.25	0.75±0.15	0.35±0.15	1.12±0.3 2.0±0.6	
	1.0			1.00±0.15			
	0.2		5.2±0.3	1.9±0.15			
	0.3			1.85±0.15]		
DED400	0.5	10+0.2		1.3±0.15	0.5+0.15		
F3N400	1.0	10±0.5		0.9±0.15	0.5±0.15		
	2.0			1.1±0.15			
	3.0			0.9±0.15			
	0.1			1.96±0.15		4.6±0.6	
	0.2			1.85±0.15			
	0.3			1.4±0.15			
PSR500	0.4	15±0.3	7.75±0.3	1.15±0.15	0.5±0.15	4 0+0 6	
	0.5			1.05±0.15		4.0±0.6	
	1.0]		1.35±0.15]		
	2.0			0.9±0.15]		

●PSR100/330/400/500





Resistors

Part No. Explanation

PSR4	0 0 I T Q F						
Part No.	Tolerance	L Spe	cial Pa	rt C	ode	Nominal Re	ר sistance
	F ±1%	В	0.1 mΩ	F	0.5 mΩ	Resistance	code, 4 digits.
		С	0.2m Ω	н	1.0m Ω	Teleranoo	Resistance
		D	0.3m Ω	J	2.0m Ω	Tolerance	code
		Е	0.4m Ω	L	3.0m Ω	F	: 4 digits
tions Code						Resistance	F

Packaging Specifications Code												
Part No.	Code	Tolerance F (±1%)	Packaging Specifications	Reel	Basic Ordering Unit (pcs)							
PSR100	KTQ	0	Embossed tape (8mm Pitch)	¢330mm (13inch)	5,000							
PSR330	ITQ	0	Embossed tape (8mm Pitch)	¢330mm (13inch)	3,000							
PSR400	ITQ	0	Embossed tape (8mm Pitch)	φ330mm (13inch)	3,000							
PSR500	HTQ	0	Embossed tape (12mm Pitch)	¢330mm (13inch)	2,000							
©: Standard product Reel (\$300mm): Compatible with JEITA standard "EIAJ ET-7200B"												

_		_							
	Resistance code, 4 digits.								
	Tolerance		Resistance code						
	F	:	4 digits						
	Resistance		F						
Γ	0.1mΩ		0L10						
	0.2mΩ		0L20						
Γ	0.3m Ω		0L30						
	0.4m Ω		0L40						
	0.5m Ω		0L50						
	1.0m Ω		1L00						
	2.0m Ω		2L00						
	3.0m Ω		3L00						

PSR350

For Current Detection

High Power Metal Plate Shunt Resistors <Ultra Low ohmic> <Low profile> (PSR350)

- Perfect for use embedded power module by low height structure.
- Circuit space can be saved by guaranteed the same rateed power as one size larger product.
- Limiting current 210A.

	PSR350								
	Part No.	o. Size Code Rated Power mm (inch) (W)		Rated Terminal Temperature (°C)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Value (mΩ)	Operating Temperature (°C)	Automotive Grade AEC-Q200
N	ew PSR350	7.9×5.6 (3222)	12	120	F (±1%)	0 to +250	0.27	-65 to +175	YES

Dimensions (Unit: mm)

Part No.	Resistance (mΩ)	L	W	t	н	b
PSR350	0.27	7.9±0.1	5.6±0.3	0.85±0.15	0.35±0.15	2.1±0.20



Part No. Explanation

			Ρ	S R 3	50	KTQF			2 7	1
			Part	No.		Tolerance	Special Part Cod	le N	Nominal Res	sistance
						F ±1%	CW 0.27mΩ	Γ	Resistance c	ode, 4 digits.
									Tolerance	Resistance code
									F	: 4 digits
P	Packaging Sp	ecificati	ions Coc	le					Resistance	F
Γ	Part No.	Code	Tolerance F (±1%)	Packaging Sp	ecifications	Reel	Basic Ordering Unit (pcs)	L	0.27m Ω	0L27
Γ	PSR350	КТQ	0	Embossed tape	(8mm Pitch)	6330mm (13inch)	5.000			

©: Standard product Reel (\$330mm): Compatible with JEITA standard "EIAJ ET-7200B"

For Current Detection High Power Metal Plate Shunt Resistors (GMR series)

- High power (3W to 10W)
- High heat dissipation
- Excellent TCR characteristics
- Low ohmic (5m Ω to 220m Ω)



G	iMR serie	S							
	Part No.	Size Code mm (inch)	Rated Power (W)	Rated Terminal Temperature (°C)	Tolerance	Temperature*1 Coefficient (ppm/°C)	Resistance Range (mΩ)	Operating Temperature (°C)	Automotive Grade AEC-Q200
			4	90	F (±1%)	0 to +25	5		
	CMP50	5025	4	30		±25	10 to 220 (E24 series)*2		YES
	GININGO	(2010)	2	110	F (±1%)	0 to +25	5		
			3	110		±25	10 to 220 (E24 series)*2		
			6432 7	70	F (±1%)	0 to +50	5		YES
	CMD100	6432				±20	10 to 220 (E24 series)*2	-65 to +170	
New	GIVINTOU	(2512)	F	44.0	F (±1%)	0 to +50	5		
			5	110		±20	10 to 220 (E24 series)*2]	
			10	70	E (.10/)	0 to +50	5		
	7142	7142	10	70	F (±1%)	±25	10 to 100 (E24 series)*2	_	
	Givin320	MR320 (2817)	7	110	E (+1%)	0 to +50	5]	123
				110	F (±1%)	±25	10 to 100 (E24 series)*2		

*1 (+20°C to +60°C) *2 Development schedule will vary depending on resistance value. Please contact us for resistance values.

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	w	t	а
GMR50	5025 (2010)	5.00±0.25	2.50±0.25	0.40±0.15	2.05±0.25
GMR100	6432 (2512)	6.40±0.25	3.20±0.25	0.40±0.15	2.75±0.25
GMR320	7142 (2817)	7.10±0.25	4.20±0.25	0.40±0.15	3.10±0.25





Packaging Specifications Code

Part No.	Code	Tolerance F (±1%)	Packaging Specifications	Reel	Basic Ordering Unit (pcs)
GMR50	н	O	Embossed tape (4mm Pitch)	φ180mm (7inch)	2,000
GMR100	н	O	Embossed tape (8mm Pitch)	φ180mm (7inch)	2,000
GMR320	Н	0	Embossed tape (8mm Pitch)	φ180mm (7inch)	2,000

Reel (ϕ 180mm): Compatible with JEITA standard "EIAJ ET-7200B" \odot : Standard product

R

For Current Detection Metal Plate Shunt Resistors <Ultra Low ohmic> (PMR series)

 Ultra low-ohmic resistance range (1mΩ or more) Improved current detection accuracy by trimming-less structure. Highly recommended for large current/ High speed switching circuit. 	*	•	\$	P.M.	- And	2100	2100
• Special low resistance temperature coefficient (TCR) alloy utilized for the resistive element.	PMR01	PMR03	PMR10	PMR18	PMR25	PMR50	PMR100

Rated pow	Rated power up PWR series												
Part No.	Size Code mm (inch)	Rated Power (W)	Rated Ambient Temperature (°C)	Rated Terminal Temperature (°C)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Value (mΩ)	Operating Temperature (°C)	Automotive Grade AEC-Q200				
PMR10	2012 (0805)	1	-	130	F (±1%) J (±5%)	±100	2	65 to 1155	YES				
PMR18	3216 (1206)	1.5	-	130	F (±1%) J (±5%)	±100	1, 2	-05 10 +155	YES				
PMR25	3225 (1210)	2	-	130	F (±1%) J (±5%)	±75	1		YES				
PMR50	5025 (2010)	2	-	130	F (±1%) J (±5%)	±75	1, 2	-65 to +175	YES				
PMR100	6432 (2512)	3	-	130	F (±1%) J (±5%)	±75 ±150	1, 2		YES				
DMD													

Part No.	Size Code mm (inch)	Rated Power (W)	Rated Ambient Temperature (°C)	Rated Terminal Temperature (°C)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Value (mΩ)	Operating Temperature (°C)	Automotive Grade AEC-Q200				
PMR01	1005 (0402)	0.2	70	_	J (±5%)	0 to 200	10		YES				
PMR03	1608 (0603)	0.25	70	-	F (±1%) J (±5%)	0 to 150	10		YES				
PMR10	2012 (0805)	0.5	70	_	F (±1%) J (±5%)	±150	3, 4, 5, 6, 7, 8, 9, 10		YES				
PMR18	3216 (1206)	1	70	-	F (±1%) J (±5%)	±100	3, 4, 5, 6, 7, 8, 9, 10	-55 to +155	YES				
PMR25	3225 (1210)	1	70	_	F (±1%) J (±5%)	±100	2, 3, 4, 5		YES				
PMR50	5025 (2010)	1	70	-	F (±1%) J (±5%)	±100	3, 4, 5, 6, 7, 8, 9, 10		YES				
PMR100	6432 (2512)	2	70	-	F (±1%) J (±5%)	±100	3, 4, 5, 6, 7, 8, 9, 10		YES				

Large Curi	Large Current Jumper type											
Part No.	Size Code mm (inch)	Rated Current (A)	Resistance	Operating Temperature (°C)	Automotive Grade AEC-Q200							
PMR01	1005 (0402)	20.0			YES							
PMR03	1608 (0603)	22.4			YES							
PMR10	2012 (0805)	31.6			YES							
PMR18	3216 (1206)	38.7	0.5mΩ Max	-55 to +155	YES							
PMR25	3225 (1210)	44.7			YES							
PMR50	5025 (2010)	50.0			YES							
PMR100	6432 (2512)	63.2			YES							

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	w	t	а	b	с
PMR01	1005 (0402)	1.0±0.05	0.5±0.05	0.25±0.1	—	0.25±0.10	—
PMR03	1608 (0603)	1.6±0.15	0.8±0.15	0.25±0.1	_	0.35±0.15	_
PMR10	2012 (0805)	2.0±0.15	1.2±0.15	0.42 to 0.28*±0.15	_	0.75 to 0.35*±0.25	—
PMR18	3216 (1206)	3.2±0.15	1.6±0.15	0.44 to 0.28*±0.15	—	1.20 to 0.5 *±0.25	—
PMR25	3225 (1210)	3.2±0.2	2.5±0.2	0.52 to 0.32*±0.15	0.5±0.2	1.00 to 0.8 *±0.2	1.95±0.2
PMR50	5025 (2010)	5.0±0.2	2.5±0.2	0.52 to 0.32*±0.15	0.5±0.2	1.85 to 0.9 *±0.2	1.95±0.2
PMR100	6432 (2512)	6.4±0.25	3.2±0.25	0.52 to 0.32*±0.15	0.5±0.25	2.3 to 1.1 *±0.25	2.65±0.25

*Each value range varies with the resistance. Please contact a ROHM sales representative for further details.



Part No. Explanation

PMR 2 5	HZP				
Part No.	Tolerance	Special Part Code			
	F ±1%	V 1mΩ to 4mΩ			
	J ±5%	U 5m Ω to 10m Ω			

J is also used for jumper

Jumper type doesn't have a special part code

Packaging Specifications Code

Dort No.	Codo	Toler	ance	Deckering Specifications	Deel	Basic Ordering Unit		
Part No.	Code	J (±5%)	F (±1%)	Packaging Specifications	Reel	(pcs)		
PMR01	ZZP	0	—	Embossed tape (2mm Pitch)	¢180mm (7inch)	10,000		
PMR03	EZP	0	0	Paper tape (4mm Pitch)	¢180mm (7inch)	5,000		
PMR10	EZP	0	0	Paper tape (4mm Pitch)	¢180mm (7inch)	5,000		
PMR18	EZP	0	0	Paper tape (4mm Pitch)	¢180mm (7inch)	5,000		
PMR25	HZP	0	0	Embossed tape (4mm Pitch)	¢180mm (7inch)	2,000		
PMR50	HZP	0	0	Embossed tape (4mm Pitch)	¢180mm (7inch)	2,000		
PMR100	HZP	0	0	Embossed tape (4mm Pitch)	¢180mm (7inch)	2,000		
el (

Nominal Resistance

Resistance code, 3 or 4 digits. 000 denotes jumper type.									
Toleran	ce Re	esistance code							
F	: 4	4 diaits							
J	: :	3 digits							
Resistance	Tole	rance							
Value (Ω)	J	F							
Jumper	000	-							
1mΩ	1L0	1L00							
2m Ω	2L0	2L00							
3 mΩ	3L0	3L00							
4mΩ	4L0	4L00							
5mΩ	5L0	5L00							
6m Ω	6L0	6L00							
7mΩ	7L0	7L00							
8m Ω	8L0	8L00							
9 mΩ	9L0	9L00							
10mΩ	10L	10L0							

For Current Detection Metal Plate Shunt Resistors <Ultra Low ohmic> <Wide Terminal type> (PML series)

• Ultra-low resistance range (0.5mΩ or more).

- Wide terminal configuration for high joint reliability.
- Avoiding heat concentration by trimming-less structure and it reduce temperature rise.



PML series	S								
Part No.	Size Code mm (inch)	Rated Power (W)	Rated Ambient Temperature (°C)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Value (mΩ)	Operating Temperature (°C)	Automotive Grade AEC-Q200	
PML10	1220 (0508)	0.66 (2/3)	70	G (±2%) J (±5%)	±200	1.0, 1.5, 2.0, 2.5		YES	
PML18	1632 (0612)	1	70	G (±2%) J (±5%)	±150	0.5, 1.0, 1.5, 2.0, 2.5		YES	
DMI 50	2550	2550	70	1 (- 50/)	±150	0.5	-55 to ±155	VES	
FML50	(1020)	2	70	J (±5%)	±100	2.2	55 10 +155	TES	
		2	70		±150	0.5			
PML100	3264 (1225)	2	70	J (±5%)	J (±5%)	10152022		YES	
	(1223)	3	25		±100 1.0, 1.5, 2.0, 2.2				

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	w	t	а	b
PML10	1220 (0508)	1.2±0.15	2.0±0.15	0.42 to 0.28* ±0.15	_	0.45 to 0.35 ±0.25
PML18	1632 (0612)	1.6±0.15	3.2±0.15	0.42 to 0.28* ±0.15	_	0.55 to 0.35 ±0.25
PML50	2550 (1020)	2.6±0.20	5.0±0.2	0.5 to 0.36* ±0.15	0.4±0.2	0.75 to 0.7* ±0.2
PML100	3264 (1225)	3.2±0.25	6.4±0.25	0.5 to 0.36* ±0.15	0.45±0.25	0.9 to 0.7* ±0.25
*Cash using same as		Disease of			fan funtle en dateile	







Packaging Specifications Code

Part No.	Code	Toler J (±5%)	ance G (±2%)	Packaging Specifications	Reel	Basic Ordering Unit (pcs)
PML10	EZP	0	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
PML18	EZP	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
PML50	HZP	0	-	Embossed tape (4mm Pitch)	φ180mm (7inch)	2,000
PML100	HZP	0	—	Embossed tape (4mm Pitch)	φ180mm (7inch)	2,000
Reel (ble with JEIT/	A standard "EI/	J ET-7200B"			

©: Standard product

LTR50

LTR100L

LTR100

For Current Detection High Power Thick Film Shunt Resistors <Wide Terminal type> (LTR/LTRL series)

- Chip resistors for current detection. (10m Ω or more)
- High joint reliability with long side terminations.
- Improvement of rated power enables to displace smaller size of resistors, and it contributes space savings in your set.

LTR/LTR	L series								
Part No.	Size Code mm (inch)	Rated Power (W)	Rated Ambient Temperature (°C)	Rated Terminal Temperature (°C)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200
	1220		70	105	D (±0.5%)	0 to 150 0 to 100	100m Ω to 180m Ω (E24 series) 200m Ω to 910m Ω (E24 series)		VES
UEW/ LIRIOL	(0508)	I	70	125	F (±1%) J (±5%)	0 to 150 0 to 100	$33m\Omega$ to $180m\Omega$ (E24 series) $200m\Omega$ to $910m\Omega$ (E24 series)		TES
LTR18	1632 (0612)	<i>lew</i> / 1.5	70	95	F (±1%) J (±5%)	0 to 300 0 to 200 0 to 150 ±100	$\begin{array}{rrr} 10m\Omega \ to 18m\Omega \ (\text{E24 series}) \\ 20m\Omega \ to 47m\Omega \ (\text{E24 series}) \\ 51m\Omega \ to \ 470m\Omega \ (\text{E24 series}) \\ 510m\Omega \ to 1\Omega \ (\text{E24 series}) \end{array}$	-55 to +155	YES
LTR50	2550 (1020)	2	70	-	F (±1%) J (±5%)	0 to 300 0 to 200 0 to 150 ±100	$\begin{array}{rrr} 10m\Omega \ to 18m\Omega \ (\text{E24 series}) \\ 20m\Omega \ to 47m\Omega \ (\text{E24 series}) \\ 51m\Omega \ to 91m\Omega \ (\text{E24 series}) \\ 100m\Omega \ to \ 910m\Omega \ (\text{E24 series}) \end{array}$		YES
LTR100L		4	70	110	F (±1%) J (±5%)	0 to 300 0 to 200 0 to 150	10mΩ to 18mΩ (E24 series) 20mΩ to 47mΩ (E24 series) 51mΩ to 91mΩ (E24 series)	-65 to +155	YES
	3264	2	70	_	F (±1%)	0 to 150 0 to 100	100m Ω to 180m Ω (E24 series) 200m Ω to 910m Ω (E24 series)		YES
170100	(1225)				J (±5%)	±200	100m Ω to 910m Ω (E24 series)	55 to 1155	
LINIO		☆3 70	☆110	F (±1%)	0 to 150 0 to 100	100m Ω to 180m Ω (E24 series) 200m Ω to 910m Ω (E24 series)	-55 10 +155	YES	
					J (±5%)	±200	100m Ω to 910m Ω (E24 series)		

☆: Under Development

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	w	t	а	b
LTR10L	1220 (0508)	1.25±0.15	2.0±0.15	0.55±0.1	0.28±0.15	0.35±0.2
LTR18	1632 (0612)	1.6±0.1	3.2±0.1	0.58±0.1	0.5±0.2	0.5±0.2
LTR50	2550 (1020)	2.5±0.15	5.0±0.15	0.58±0.15	0.38±0.2	0.9±0.2
LTR100L	2064 (1005)	3.1±0.15	6.4±0.15	0.58±0.15	0.5±0.25	1.0±0.25
LTR100	3204 (1223)	3.2±0.15	6.4±0.15	0.55±0.15	0.4±0.25	1.13±0.25

LTR10L/LTR18/LTR100L/LTR100 (No marking) LTR50 (Marking)



LTR10L

LTR18

Part No. Explanation



Packaging Specifications Code

Dort No.	Codo	Tolerance		Deckering Specifications	Baal	Basic Ordering Unit
Fart NO.	Code	J (±5%)	F (±1%)	Fackaging Specifications	neei	(pcs)
LTR10L*	EZP	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
LTR18	EZP	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
LTR50	UZP	0	0	Embossed tape (4mm Pitch)	φ180mm (7inch)	5,000
LTR100L	JZP	0	0	Embossed tape (4mm Pitch)	φ180mm (7inch)	4,000
LTR100	JZP	0	0	Embossed tape (4mm Pitch)	φ180mm (7inch)	4,000

 \bigcirc : Standard product *LTR10L D class (±0.5%) is available for $100m\Omega$ to $910m\Omega$ only

R Resistors

For Current Detection Thick Film Shunt Resistors <Reverse Attached type> (UCR series)

- Chip resistors for current detection. (11m Ω or more)
- Resistive element is located at bottom side, which reduces the resistance shift during mounting process.
- ROHM's unique structure achieved improvement of heat.



UCR series									
Part No.	Size Code mm (inch)	Rated Power (W) (70°C)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200		
UCR006	0603 (0201)	0.1	F (±1%) J (±5%)	0 to 300	100m Ω to 910m Ω (E24 series)		YES		
UCR01	1005 (0402)	0.125	F (±1%) J (±5%)	0 to 300 0 to 250 0 to 200	68mΩ to 91mΩ (E24 series) 100mΩ to 200mΩ (E24 series) 220mΩ to 910mΩ (E24 series)	_	YES		
UCR03	1608 (0603) 0	0.25	F (±1%) J (±5%)	0 to 250 0 to 200 0 to 150	20mΩ to 47mΩ (E24 series) 50mΩ to 91mΩ (E24 series) 100mΩ to 200mΩ (E24 series)		YES*		
		0.2	F (±1%) J (±5%)	0 to 150	220m Ω to 910m Ω (E24 series)	-55 to +155			
UCR10	2012 (0805)	0.33 (1/3)	F (±1%) J (±5%)	250±200 0 to 250 0 to 150	11mΩ to 18mΩ (E24 series) 20mΩ to 47mΩ (E24 series) 51mΩ to 100mΩ (E24 series)		YES		
110019	3216		F (±1%) J (±5%)	0 to 350 0 to 200	11m Ω to 18m Ω (E24 series) 20m Ω to 39m Ω (E24 series)		VEC		
UCR18	(1206)	(1206)	3216 (1206)	0.5	F (±1%) J (±5%)	0 to 150	43m Ω to 100m Ω (E24 series)		TES

*Limited to $100m\Omega$ and higher

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	w	t	а	b
UCR006	0603 (0201)	0.62±0.05	0.32±0.05	0.24±0.05	0.18±0.1	0.22±0.1
UCR01	1005 (0402)	1.0±0.1	0.55±0.1	0.37±0.05	0.28±0.1	0.34±0.1
UCR03	1608 (0603)	1.6±0.1	0.87±0.1	0.5±0.1	0.45±0.2	0.45±0.2
UCR10	2012 (0805)	2.0±0.1	1.25±0.1	0.55±0.1	0.24±0.2	0.5±0.2
UCR18	3216 (1206)	3.2±0.15	1.6±0.15	0.55±0.1	0.3±0.2	0.9±0.25



Part No. Explanation



Packaging Specifications Code

Part No	Code	Tolerance		Packaging Specifications	Bool	Basic Ordering Unit	Bemarks
i artivo.	oouc	J (±5%)	F (±1%)	r ackaging opecifications	Ticci	(pcs)	Tieffiarks
UCR006	YVP	0	0	Paper tape (2mm Pitch)	φ180mm (7inch)	15,000	-
UCR01	MVP	0	0	Paper tape (2mm Pitch)	φ180mm (7inch)	10,000	-
	EWP	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000	20mΩ to 47mΩ
	EVP	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	(bcs) 15,000 10,000 5,000 20mΩ 5,000 51mΩ 5,000 51mΩ	51mΩ to 910mΩ
UCR10	EVH	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000	-
UCR18	EVH	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000	-

Reel (ϕ 180mm): Compatible with JEITA standard "EIAJ ET-7200B" \odot : Standard product

For Current Detection General Purpose Chip Resistors: <Low ohmic> <High Power> (MCRL series)

- Guaranteed the same rated power as one size larger product by changing the design of the resistive element.
- Very-low ohmic resistance from 47m Ohm is in lineup by thick-film resistive element.
- High-reliability chip resistor employing metal glaze as resistive element.



	MCR L se	eries							
	Part No.	Size Code mm (inch)	Rated Power (W) (70°C)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200	
	MCB10I	2012	0.5	F (±1%)	0 to 250	47m Ω to 110m Ω (E24 series)	VE	VES	
-	(0805)	(0805)	05) 0.5	J (±5%)	0 to 150	120m Ω to 910m Ω (E24 series)	55 to 155	TES	
	MCD19	3216	0.75	F (±1%)	0 to 250	47m Ω to 91m Ω (E24 series)	-55 10 155	VEC	
-	New MCR18L	(1206)	0.75	J (±5%)	0 to 150	100m Ω to 910m Ω (E24 series)		YES	

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	w	t	а	b
MCR10L	2012 (0805)	2.0±0.1	1.25±0.1	0.55±0.1	0.60±0.20*1 0.45±0.20*2	0.40±0.20
MCR18L	3216 (1206)	3.20+0.15 -0.20	1.6±0.15	0.55±0.1	0.90±0.20*1 0.75±0.20*2	0.50±0.25

*1 Resistance range: $47m\Omega$ to $110m\Omega$ *2 Resistance range: $120m\Omega$ to $910m\Omega$





Part No. Explanation



Packaging Specifications Code

Iolera	ance	Pookaging Specifications	Bool	Basic Ordering Unit
J(±5%)	F(±1%)	Fackaging Specifications	neer	(pcs)
O	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
O	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
	J(±5%)	J(±5%) F(±1%) O O O O	J(±5%) F(±1%) Packaging Specifications O O Paper tape (4mm Pitch) O O Paper tape (4mm Pitch)	J(±5%) F(±1%) Packaging Specifications Reel O O Paper tape (4mm Pitch) \$

R Resistors

High Reliability High Anti-surge Chip Resistors (SDR series) Anti-surge Chip Resistors (ESR series)

Exclusive resistive element pattern and laser trimming technology results in significantly improved surge resistance characteristics.
Superior power ratings.



SDR serie	es							SDR series											
Part No.	Size Code mm (inch)	Rated Power (W)	Rated Ambient Temperature (°C)	Rated Terminal Temperature (°C)	Limiting Element Voltage (V)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200									
						D (±0.5%)	±100	10 Ω to 1M Ω (E24, E96 series)											
		0.3	70	_	150	E (+1%)	±200	1Ω to 9.76Ω (E24, E96 series)											
		0.5	70	_	150	F (±170)	±100	10 Ω to 10M Ω (E24, E96 series)]										
						J (±5%)	±200	1 Ω to 10M Ω (E24 series)]										
						D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)]										
	1608	New 0.33	70	105	450	E (40()	±200	1Ω to 9.76Ω (E24, E96 series)	1	VEO									
SDR03	(0603)	(1/3)	70	125	150	F (±1%)	±100	10Ω to 10MΩ (E24, E96 series)	1	YES									
						J (±5%)	±200	1Ω to 10MΩ (E24 series)	1										
		5∼0.4				D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)											
	-~0.4		70	105	450	E (40()	±200	1Ω to 9.76Ω (E24, E96 series)	-55 to +155										
	₩0.4	70	105	150	F (±1%)	±100	10Ω to 10MΩ (E24, E96 series)	1											
					J (±5%)	±200	1Ω to 10MΩ (E24 series)	1											
						D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)	1										
		0.5	70	<i>New</i> /115	400	F (±1%)	±100	1Ω to 10MΩ (E24, E96 series)	1										
	2012			J (±5%)	±200	1Ω to 10MΩ (E24 series)	-												
SDR10	(0805)					D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)	-	YES									
		☆0.66	70	105	400	F (±1%)	±100	1Ω to 10MΩ (E24, E96 series)	-										
		(2/3)				J (±5%)	±200	1Ω to 10MΩ (E24 series)	-										
ESP sorie						<u> </u>	1												
Lon sent		Patad	Poted Ambient	Poted Terminal	Limiting		Tomporatura		Operating	Automotivo									
Part No.	Size Code mm (inch)	Power (W)	Temperature (°C)	Temperature (°C)	Element Voltage (V)	Tolerance	Coefficient (ppm/°C)	Resistance Range	Temperature (°C)	Grade AEC-Q200									
ESR01 1005 (0402)	1005	005 0.2 70	70		76	F (±1%)	±200	10Ω to 976kΩ (E24, E96 series) 1MΩ to 2.2MΩ (E24 series)		VEO									
	0.2	70	_	15	J (±5%)	+500/-200	1Ω to 9.1Ω (E24 series)	_	TES										
					- (,-)	±200	10Ω to 10MΩ (E24 series)												
		0.25 70				D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)											
			70	_	150	F (+1%)	±200	1Ω to 9.76Ω (E24, E96 series)											
						. (=. ///	±100	10Ω to 10MΩ (E24, E96 series)											
ESB03	1608					J (±5%)	±200	1 Ω to 10M Ω (E24 series)		YES									
	(0603)				150	D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)	_	0									
		☆0.33	70	130		F (+1%)	±200	1Ω to 9.76Ω (E24, E96 series)											
		(1/3)	10	100		1 (±170)	±100	10 Ω to 10M Ω (E24, E96 series)											
						J (±5%)	±200	1 Ω to 10M Ω (E24 series)											
						D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)]										
		0.4	70	-	200	F (±1%)	±100	1 Ω to 10M Ω (E24, E96 series)											
ECD10	2012					J (±5%)	±200	1Ω to 10MΩ (E24 series)]	VEC									
LONIO	(0805)					D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)	-55 to +155	TES									
		☆0.5	70	115	200	F (±1%)	±100	1Ω to 10MΩ (E24, E96 series)	1										
						J (±5%)	±200	1Ω to 10MΩ (E24 series)	1										
						D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)	1										
		0.5	70	_	200	F (±1%)	±100	1Ω to 10MΩ (E24, E96 series)	1										
	3216					J (±5%)	±200	1Ω to 10MΩ (E24 series)	1										
ESR18	(1206)					D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)	1	YES									
	☆0.66 70 10	105	200	F (±1%)	±100	1Ω to 10MΩ (E24, E96 series)	1												
		(2/3)				J (±5%)	±200	1Ω to 10MΩ (E24 series)	-										
						D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)	-										
		0.66	70	_	200	F (±1%)	±100	1Ω to 10MΩ (E24, E96 series)	1										
	3225	(2/3)		-		J (±5%)	±200	1Ω to 10MΩ (E24 series)	<u>'</u>										
ESR25	(1210)					D (±0.5%)	±100	10Ω to 1MΩ (E24, E96 series)	1	YES									
		☆0.75	70	95	200	F (±1%)	±100	1Ω to 10MΩ (E24, E96 series)	1										
	40.75	20.75			33 200	J (±5%)	±200	1Ω to 10MΩ (E24 series)	-										

*E24: Standard products E96: Custom products

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	W	t	а	b
SDR03	1608 (0603)	1.6±0.1	0.8±0.1	0.45±0.1	0.25±0.1	0.25±0.1
SDR10	2012 (0805)	2.0±0.1	1.25±0.1	0.55±0.1	0.25±0.1	0.4±0.2
ESR01	1005 (0402)	1.0±0.05	0.5±0.05	0.35±0.05	0.2±0.1	0.25+0.05
ESR03	1608 (0603)	1.6±0.1	0.8±0.1	0.45±0.1	0.3±0.2	0.3±0.2
ESR10	2012 (0805)	2.0±0.1	1.25±0.1	0.55±0.1	0.3±0.2	0.4±0.2
ESR18	3216 (1206)	3.2±0.15	1.6±0.15	0.55±0.1	0.3±0.25	0.5±0.25
ESR25	3225 (1210)	3.2±0.15	2.5±0.15	0.55±0.1	0.3±0.25	0.5±0.25





Part No. Explanation



Packaging Specifications Code

Part No	Code		Tolerance		Packaging Specifications	Bool	Basic Ordering Unit
Fart NO.	Coue	J (±5%)	F (±1%)	D (±0.5%)	Fackaging Specifications	neel	(pcs)
SDR03	EZP	O	0	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
SDR10	EZP	0	0	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
ESR01	MZP	0	0	-	Paper tape (2mm Pitch)	φ180mm (7inch)	10,000
ESR03	EZP	0	0	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
ESR10	EZP	O	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
ESR18	EZP	0	0	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
ESR25	JZP	0	0	O	Embossed tape (4mm Pitch)	φ180mm (7inch)	4,000

Reel (§180mm): Compatible with JEITA standard "EIAJ ET-7200B" ©: Standard product

High Reliability High Power Chip Resistors <Wide Terminal type> <Anti-surge> (LTR series)

• High joint reliability with long side terminations.

- Highest power ratings in their class.
- Guaranteed anti-surge characteristic in all series.



LTR serie	S												
Part No.	Size Code mm (inch)	Rated Power (W)	Rated Ambient Temperature (°C)	Rated Terminal Temperature (°C)	Limiting Element Voltage (V)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200			
						D (±0.5%)	±100	10Ω to 976Ω (E24, E96 series)					
		New 1	70	125		F (±1%)	±100	1Ω to 976Ω (E24, E96 series)					
I TP10	1220				150	J (±5%)	±200	1 Ω to 976 Ω (E24 series)		VES			
	(0508)				150	D (±0.5%)	±100	1k Ω to 1M Ω (E24, E96 series)		TEO			
		0.25	70	-		F (±1%)	±100	1k Ω to 1M Ω (E24, E96 series)					
						J (±5%)	±200	1k Ω to 1M Ω (E24 series)					
						D (±0.5%)	±100	10 Ω to 976 Ω (E24, E96 series)					
LTR18 1632 (0612)	New 1.5	70	95		F (±1%)	±100	1Ω to 976Ω (E24, E96 series)						
				200	J (±5%)	±200	1Ω to 976Ω (E24 series)		VES				
				200	D (±0.5%)	±100	1k Ω to 1M Ω (E24, E96 series)		165				
		0.75	70	-		F (±1%)	±100	1k Ω to 1M Ω (E24, E96 series)	55 to +155 -				
						J (±5%)	±200	1k Ω to 1M Ω (E24 series)					
					-	D (±0.5%)	±100	10 Ω to 1M Ω (E24, E96 series)					
		1	70	-		F (±1%)	±100	1Ω to 1MΩ (E24, E96 series)					
I TP50	2550				200	J (±5%)	±200	1 Ω to 1M Ω (E24 series)		VES			
EINSO	(1020)				200	D (±0.5%)	±100	10 Ω to 1M Ω (E24, E96 series)		125			
		☆2	70	95		F (±1%)	±100	1Ω to 1MΩ (E24, E96 series)					
						J (±5%)	±200	1 Ω to 1M Ω (E24 series)					
						D (±0.5%)	±100	10 Ω to 1M Ω (E24, E96 series)					
		2	70	-		F (±1%)	±100	1Ω to 1MΩ (E24, E96 series)					
3264				200	J (±5%)	±200	1 Ω to 1M Ω (E24 series)]	VES				
211100	(1225)	.25)			200	D (±0.5%)	±100	10 Ω to 1M Ω (E24, E96 series)		125			
					☆3	70	110		F (±1%)	±100	1 Ω to 1M Ω (E24, E96 series)		
				23			[J (±5%)	±200	1 Ω to 1M Ω (E24 series)			

*E24: Standard products E96: Custom products

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	w	t	а	b
LTR10	1220 (0508)	1.2±0.1	2.0±0.1	0.55±0.1	0.25±0.1	0.35±0.2
LTR18	1632 (0612)	1.6±0.15	3.2±0.15	0.55±0.1	0.3±0.2	0.5±0.2
LTR50	2550 (1020)	2.5±0.15	5.0±0.15	0.55±0.1	0.38±0.2	0.9±0.2
LTR100	3264 (1225)	3.2±0.15	6.4±0.15	0.55±0.15	0.4±0.25	1.13±0.25



☆: Under Development

Part No. Explanation



Packaging Specifications Code

Dort No.	Codo		Tolerance		Backaging Specifications	Paal	Basic Ordering Unit				
Fart NO.	Code	J (±5%)	F (±1%)	D (±0.5%)	Fackaging Specifications	neei	(pcs)				
LTR10	EZP	0	0	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000				
LTR18	EZP	0	0	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000				
LTR50	UZP	0	0	0	Embossed tape (4mm Pitch)	φ180mm (7inch)	5,000				
LTR100	JZP	0	0	0	Embossed tape (4mm Pitch)	φ180mm (7inch)	4,000				

Reel (ϕ 180mm): Compatible with JEITA standard "EIAJ ET-7200B" \odot : Standard product

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www.rohm.com

High Reliability High Voltage Resistance Chip Resistors (KTR series)

- Twice the rated voltage of conventional products.
- Perfect for use in Camera Flash circuit, etc.

1			103
KTR03	KTR10	KTR18	KTR25

KTR serie	S												
Part No.	Size Code mm (inch)	Rated Power (W) (70°C)	Limiting Element Voltage (V)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200					
				E (+1%)	±200	1 Ω to 9.76 Ω (E24, E96 series)							
KTR03	1608 (0603)	0.1	0.1	0.1	350	F (±170)	±100	10 Ω to 10M Ω (E24, E96 series)		YES			
				J (±5%)	±200	1 Ω to 10M Ω (E24 series)							
KTD10	2012	0 105	0 105	0.105	0 105	0 105	0 105	400	F (±1%)	±100	1 Ω to 10M Ω (E24, E96 series)		VEC
KIRIU	(0805)	0.125	400	J (±5%)	±200	1 Ω to 30M Ω (E24 series)	-55 to +155	125					
KTD10	3216	0.05	500	F (±1%)	±100	1 Ω to 10M Ω (E24, E96 series)		VEC					
KIRIO	(1206) 0.25	500	J (±5%)	±200	1 Ω to 10M Ω (E24 series)		165						
KTR25 3225 (1210)	0.33	0.33 000	F (±1%)	±100	1 Ω to 10M Ω (E24, E96 series)		VEC						
	(1210)	(1/3)	600	J (±5%)	±200	1 Ω to 10M Ω (E24 series)		YES					

*E24: Standard products E96: Custom products

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	w	t	а	b
KTR03	1608 (0603)	1.6±0.1	0.8±0.1	0.45±0.1	0.3±0.2	0.3±0.2
KTR10	2012 (0805)	2.0±0.1	1.25±0.1	0.55±0.1	0.3±0.2	0.4±0.2
KTR18	3216 (1206)	3.2±0.15	1.6±0.15	0.55±0.1	0.3±0.25	0.5±0.25
KTR25	3225 (1210)	3.2±0.15	2.5±0.15	0.55±0.1	0.3±0.25	0.5±0.25







Part No. Explanation

KTR1		
Part No.	Tolerance	Nominal Resistance
	F ±1%	Resistance code, 3 or 4 digits.
	J ±5%	Tolerance Resistance code
		F : 4 digits
		J : 3 digits

Packaging Specifications Code

Port No	Codo	Toler	rance	Packaging Specifications	Bool	Basic Ordering Unit
Fart NO.	Coue	J (±5%)	F (±1%)	Fackaging Specifications	neel	(pcs)
KTR03	EZP	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
KTR10	EZP	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
KTR18	EZP	0	0	Paper tape (4mm Pitch)	¢180mm (7inch)	5,000
KTR25	JZP	0	0	Embossed tape (4mm Pitch)	φ180mm (7inch)	4,000

R Resistors

High Reliability Tolerance for Sulfurization Chip Resistor (SFR series) • Improved Anti-sulfur reliability by

ROHM original structure.



SFR serie	S											
Part No.	Size Code mm (inch)	Rated Power (W) (70°C)	Limiting Element Voltage (V)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200				
	1005	0.063		F (±1%)	±100	10 Ω to 2.2M Ω (E24, E96 series)						
SFR01	(0402)	(1/16)	50	J (±5%)	+500/-250 ±200	1Ω to 9.1Ω (E24 series) 10Ω to 10ΜΩ (E24 series)		YES				
	1608	0.1						F (±1%)	±100	10 Ω to 10M Ω (E24, E96 series)		
SFR03 (0603)	(0603)		50	J (±5%)	±400 ±200	1Ω to 9.1Ω (E24 series) 10Ω to 10ΜΩ (E24 series)		YES				
	2012		150	F (±1%)	±100	10 Ω to 2.2M Ω (E24, E96 series)	55 to 1155					
SFR10	(0805)	0.125		J (±5%)	±400 ±200	1Ω to 9.1Ω (E24 series) 10Ω to 10MΩ (E24 series)	-55 to +155	YES				
	3016			F (±1%)	±100	10 Ω to 2.2M Ω (E24, E96 series)						
SFR18 3216 (1206)	(1206)	0.25	200	J (±5%)	±400 ±200	1Ω to 9.1Ω (E24 series) 10Ω to 10ΜΩ (E24 series)		YES				
SED 25	3225	0.5	200	F (±1%)	F (±1%) ±100 10Ω to 1MΩ (E24, E96 series)			VES				
SFR25	(1210)	0.5	200	200 J (±5%)	±200	1 Ω to 1M Ω (E24 series)	1	YES				

*E24: Standard products E96: Custom products

Jumper t	уре				
Part No.	Size Code mm (inch)	Rated Current (A)	Resistance	Operating Temperature (°C)	Automotive Grade AEC-Q200
SFR01	1005 (0402)	1			YES
SFR03	1608 (0603)	1			YES
SFR10	2012 (0805)	2	$50m\Omega$ Max	–55 to +155°C	YES
SFR18	3216 (1206)	2			YES
SFR25	3225 (1210)	2			YES

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	w	t	а	b
SFR01	1005 (0402)	1.0±0.05	0.5±0.05	0.35±0.05	0.33±0.08	0.25 ^{+0.05} -0.10
SFR03	1608 (0603)	1.6±0.1	0.8±0.1	0.45±0.1	0.4±0.2	0.3±0.2
SFR10	2012 (0805)	2.0±0.1	1.25±0.1	0.55±0.1	0.4±0.2	0.4±0.2
SFR18	3216 (1206)	$3.2^{+0.15}_{-0.20}$	1.6±0.15	0.55±0.1	0.55±0.25	0.5±0.25
SFR25	3225 (1210)	$3.2^{+0.15}_{-0.20}$	2.5±0.15	0.55±0.1	0.55±0.25	0.5±0.25

SFR01 (No marking)



SFR03/10/18/25



Part No. Explanation



Packaging Specifications Code

	-					
Part No.	Code	Toler J (±5%)	Tolerance Packaging Specifications Reel		Reel	Basic Ordering Unit (pcs)
SFR01	MZP	0	0	Paper tape (2mm Pitch)	φ180mm (7inch)	10,000
SFR03	EZP	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
SFR10	EZP	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
SFR18	EZP	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
SFR25	JZP	0	0	Embossed tape (4mm Pitch)	∳180mm (7inch)	4,000

Reel (ϕ 180mm): Compatible with JEITA standard "EIAJ ET-7200B" \odot : Standard product

R

General Purpose Chip Resistors <High Power> (MCRS series)

- In MCRS series, the same rated power is guaranteed as that of one-size larger products than conventional MCR series by changing the design of the resistive element.
- Circuit space can be saved (reducing the area by about 60% by replacing 0603 size with 0402 size)

•		•		
٠		•		
MCR01S	MCR03S	MCR10S	MCR18S	MCR50S

	nes									
Part No.	Size Code mm (inch)	Rated Power (W)	Rated Ambient Temperature (°C)	Rated Terminal Temperature (°C)	Limiting Element Voltage (V)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200
	1005					F (±1%)	±100	10Ω to 10MΩ (E24, E96 series)		
MCR01S	1005	0.1	70	-	75	J (±5%)	±400	1Ω to 9.1Ω (E24 series)		YES
	(0102)						±200	10 Ω to 10M Ω (E24 series)		
	1000	10				F (±1%)	±100	10Ω to 10MΩ (E24, E96 series)		
MCR03S	1608 (0603)	0.125	70	_	150 J (±5%) -	1 (, 50/)	±400	1Ω to 9.1Ω (E24 series)		YES
	(0000)					±200	10Ω to 10MΩ (E24 series)			
	2012 (0805) 0	2012 (0805) 0.25		-	200	F (±1%)	±100	10Ω to 2.2MΩ (E24, E96 series)	55 to +155	
MCR10S			70			J (±5%)	±400	1Ω to 9.1Ω (E24 series)		YES
							±200	10Ω to 10MΩ (E24 series)		
						F (±1%)	±100	10Ω to 2.2MΩ (E24, E96 series)		
MCR18S	3216	0.4	70	-	200	1 (. 50/)	±400	1Ω to 9.1Ω (E24 series)		YES
	(1200)					J (±5%)	±200	10Ω to 10MΩ (E24 series)	1	
						E (110/)	±200	1Ω to 9.1Ω (E24 series)		
	5025	1.5	.5 70	110	000	F (±1%)	±100	10Ω to 2.2MΩ (E24, E96 series)	_	VEO
☆MCR50S	(2010)	(2010) 1.5			200 -	J (±5%)	±400	1Ω to 9.1Ω (E24 series)		YES
							±200	10Ω to 10MΩ (E24 series)		
*E24: Standard produ	24: Standard products E96: Custom products									

*E24: Standard products E96: Custom products

MODE

Jumper t	Jumper type										
Part No.	Size Code mm (inch)	Rated Current (A)	Resistance	Operating Temperature (°C)	Automotive Grade AEC-Q200						
MCR01S	1005 (0402)	1.5			YES						
MCR03S	1608 (0603)	2			YES						
MCR10S	2012 (0805)	2.5	50mΩ Max	-55 to +155	YES						
MCR18S	3216 (1206)	2.5			YES						
MCR50S	5025 (2010)	4			YES						

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	W	t	а	b
MCR01S	1005 (0402)	1.0±0.05	0.5±0.05	0.35±0.05	0.2±0.1	0.25 ^{+0.05} -0.10
MCR03S	1608 (0603)	1.6±0.1	0.8±0.1	0.45±0.1	0.3±0.2	0.3±0.2
MCR10S	2012 (0805)	2.0±0.1	1.25±0.1	0.55±0.1	0.4±0.2	0.4±0.2
MCR18S	3216 (1206)	3.2 ^{+0.15} -0.20	1.6±0.15	0.55±0.1	0.5±0.25	0.5±0.25
MCR50S	5025 (2012)	5.0±0.15	2.5±0.15	0.55±0.15	0.5±0.25	0.5±0.25







Part No. Explanation



Packaging Specifications Code

Port No	Codo	Toler	rance	Backaging Specifications	Bool	Basic Ordering Unit
Fait NO.	Code	J(±5%)	F(±1%)	Fackaging Specifications	heel	(pcs)
MCR01S	MQP	O	0	Paper tape (2mm Pitch)	φ180mm (7inch)	10,000
MCR03S	EQP	O	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
MCR10S	EQP	O	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
MCR18S	EQP	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
MCR50S	JQP	0	0	Embossed tape (4mm Pitch)	φ180mm (7inch)	4,000
De al (+100mm): Came		daved #EIA LET 7000D"				

Reel (¢180mm): Comp : Standard product with JEITA standard "EIAJ ET-7200B



General Purpose Chip Resistors (MCR series)

 High reliability chip resistors optimized 						
for a variety of applications.				A		<u> </u>
\cdot Six package sizes, ranging from 01005 to 1205.	\$	۲	٠	station of the second s		152
·Market-proven reliability.						\sim
	MCR004	MCR006	MCR01	MCR03	MCR10	MCR18

MCR series																
Part No.	Size Code mm (inch)	Rated Power (W) (70°C)	Limiting Element Voltage (V)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200								
				F (±1%)	±300 +250	10Ω to 97.6Ω (E24, E96 series) 1000 to 3MQ (E24, E96 series)										
MCR004	0402	0.031	15		+600/-100	1Ω to 9.1Ω (E24 series)	1	_								
	(01005)	(1/32)		J (±5%)	±300	10Ω to 91Ω (E24 series)	1									
				· · /	±250	100Ω to 3MΩ (E24 series)	1									
				D (+0 5%)	±200	10Ω to 976Ω (E24, E96 series)	-55 to +125									
				D (±0.5%)	±100	1kΩ to 1MΩ (E24, E96 series)]									
MCD006	0603	0.05	25	E (+1%)	+600/-200	1Ω to 9.1Ω (E24 series)]	VES								
MCR000	(0201)	0.05		1 (±170)	±100	10Ω to 10MΩ (E24, E96 series)]	TES								
				.1 (+5%)	+600/-200	1Ω to 9.1Ω (E24 series)										
				0 (20 /0)	±200	10Ω to 10MΩ (E24 series)										
												D (+0.5%)	±100	10Ω to 97.6Ω (E24, E96 series)		
	MCB01 1005 0.063			B (10:070)	±50	100Ω to 1MΩ (E24, E96 series)										
MCR01		0.063	50	F (+1%)	±400	1Ω to 9.1 Ω (E24 series)	-	YES								
monor	(0402)	(1/16)		. (=: ////	±100	10Ω to 2.2MΩ (E24, E96 series)		0								
				J (±5%)	+500/-250	1Ω to 9.1Ω (E24 series)										
					- (,-,	±200	100 to 10M0 (E24 series)	-								
				D (±0.5%)	±100	100 to 97.60 (E24, E96 series)										
	1000			. ,	±50	100Ω to $1M\Omega$ (E24, E96 series)										
MCR03	1608	0.1	50	F (±1%)	±400	10 to 9.10 (E24 series)	-	YES								
	(0603)				±100	10 to 0.10 (E24, E96 series)	-									
				J (±5%)	±400	100 to 10M0 (E24 series)	-55 to +155									
					+100	100 to 9760 (E24 Series)	-									
		0 125		D (±0.5%)	+50	1000 to 1M0 (E24, E96 series)	-									
MCB10	2012	0.120	150	E (+1%)	+100	100 to 2 2M0 (E24, E96 series)	-	YES								
Monto	(0805)		100	1 (±170)	+400	10 to 9.10 (F24 series)	-	120								
	0.1	0.1		J (±5%)	+200	100 to 10M0 (E24 series)										
				D (0 50)	±100	10Ω to 97.6Ω (E24, E96 series)	1									
		0.25		D (±0.5%)	±50	100Ω to 1MΩ (E24, E96 series)	-									
MCR18	3216		200	F (±1%)	±100	10Ω to 2.2MΩ (E24, E96 series)	1	YES								
	(1206)) 0.125	200	1 (. 50()	±400	1Ω to 9.1Ω (E24 series)	1	-								
				J (±5%)	±200	10Ω to 10MΩ (E24 series)	1									

*E24: Standard products E96: Custom products

Jumper t	уре				
Part No.	Size Code mm (inch)	Rated Current (A)	Resistance	Operating Temperature (°C)	Automotive Grade AEC-Q200
MCR004	0402 (01005)	0.5		55 to 1125	-
MCR006	0603 (0201)	0.5		-55 10 +125	YES
MCR01	1005 (0402)	1	50m0 Max		YES
MCR03	1608 (0603)	1	JUIII WIAX	55 to 155	YES
MCR10	2012 (0805)	2		-55 10 +155	YES
MCR18	3216 (1206)	2			YES

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	w	t	а	b
MCR004	0402 (01005)	0.4±0.02	0.2±0.02	0.13±0.02	0.1±0.03	0.1 ±0.03
MCR006	0603 (0201)	0.6±0.03	0.3±0.03	0.23±0.03	0.1±0.05	0.15±0.05
MCR01	1005 (0402)	1.0±0.05	0.5±0.05	0.35±0.05	0.2±0.1	0.25 ^{+0.05} -0.10
MCR03	1608 (0603)	1.6±0.1	0.8±0.1	0.45±0.1	0.3±0.2	0.3 ±0.2
MCR10	2012 (0805)	2.0±0.1	1.25±0.1	0.55±0.1	0.4±0.2	0.4 ±0.2
MCR18	3216 (1206)	3.2±0.15	1.6±0.15	0.55±0.1	0.5±0.25	0.5 ±0.25



MCR10/18





Part No. Explanation



Packaging Specifications Code

Dartha	Cada		Tolerance		Deckezing Specifications	Deal	Basic Ordering Unit
Part NO.	Code	J (±5%)	F (±1%)	D (±0.5%)	Packaging Specifications	Reel	(pcs)
MCR004	QLP	O	0	—	Paper tape (2mm Pitch)	φ180mm (7inch)	20,000
MCR006	YLP	0	0	0	Paper tape (2mm Pitch)	φ180mm (7inch)	15,000
MCR01	MZP	0	0	0	Paper tape (2mm Pitch)	≬180mm (7inch)	10,000
MCR03	EZP	0	0	0	Paper tape (4mm Pitch)	≬180mm (7inch)	5,000
MCR10	EZP	0	0	0	Paper tape (4mm Pitch)	φ 1 80mm (7inch)	5,000
MCR18	EZP	0	0	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000

Reel (ϕ 180mm): Compatible with JEITA standard "EIAJ ET-7200B \odot : Standard product

Resistors **R**

Chip resistor networks (MNR series <0402×2 to 0603×4>)

Reduces cost

Use of chip networks reduces the number of components and saves mounting space.

• Easy fillet inspection

Convex type electrodes facilitate visual inspection of fillets. Inspection can be performed with automatic inspection equipment.



MNR ser	ies <0402	×2 to	0603>	×4>						
Part No.	Size Code mm (inch)	No. of Terminals	No. of Elements	Rated Power (W) (70°C)	Limiting Element Voltage (V)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200
MNR02	1005 (0402)×2	4	2	0.063/Element	25	J (±5%)	±200	10 Ω to 1M Ω (E24 series)		YES
MNR04	1005 (0402)×4	8	4	0.063/Element	25	J (±5%)	+500/-250 ±200	1 Ω to 9.1 Ω (E24 series) 10 Ω to 1M Ω (E24 series)	55 to 1155	YES
MNR12	1608 (0603)×2	4	2	0.063/Element	50	J (±5%)	±200	10 Ω to 1M Ω (E24 series)	-55 10 +155	YES
MNR14	1608 (0603)×4	8	4	0.063/Element	50	J (±5%)	±500 ±200	2.2Ω to 6.8Ω (E6 series) 10Ω to 1MΩ (E24 series)		YES

Jumper	type				
Part No.	Size Code mm (inch)	Rated Current	Resistance	Operating Temperature (°C)	Automotive Grade AEC-Q200
MNR02	1005 (0402)×2	1A/Element		55 to 1155	YES
MNR04	1005 (0402)×4	1A/Element	50m0 Max		YES
MNR12	1608 (0603)×2	1A/Element	JUIII2 WAX	-55 10 +155	YES
MNR14	1608 (0603)×4	1A/Element			YES

 $B_1 = B_2$

b

0.5±0.1 0.3±0.2 0.6±0.15 0.25±0.15 0.8

с

0.33^{+0.1}_{-0.05} 0.25±0.1 0.68

р

Dimensions (Unit: mm)

Part No.

MNR02

MNR12 1.6±0.1

L

1.0±0.1

MNR02/MNR12 (Marked except MNR02)

1.0±0.1 0.35±0.1

W

1.6±0.1



t

a

0.2±0.1

MNR04/MNR14 (Marked except MNR04)

Different marking system may apply to each product type.



Part No.	L	W	t	а	b1	b ₂	с	р
MNR04	2.0±0.1	1.0±0.1	0.35±0.1	0.2±0.1	0.3±0.1	0.4±0.1	0.25±0.1	0.5
MNR14	3.2±0.1	1.6±0.1	0.5±0.1	0.3±0.2	0.4±0.15	0.6±0.15	0.25±0.15	0.8



Packaging Specifications Code

	-				
Dort No	Part No Code To		Packaging Specifications	Pool	Basic Ordering Unit
Fart NO.	Coue	J (±5%)	Fackaging Specifications	neer	(pcs)
MNR02	M0AP	0	Paper tape (2mm Pitch)	φ180mm (7inch)	10,000
MNR04	M0AP	0	Paper tape (2mm Pitch)	¢180mm (7inch)	10,000
MNR12	E0AP	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
MNR14	E0AP	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000

Reel (\phi180mm): Compatible with JEITA standard "EIAJ ET-7200B"

: Standard product



8-element Chip Resistor Networks (MNR series <0603×5 to 0602×8>)

- One package built in 8-element chip contributes to space-saving
- •8 resistor elements reduce mounting cost
- Convex type electrodes facilitate visual inspection of fillets. Inspection can be performed with automatic inspection equipment.
- Suitable for pull-up resistor, damping resistor
- No direction to be mounted



MNR se	MNR series <0603×5 to 0602×8>											
Part No.	Size Code mm (inch)	No. of Terminals	No. of Elements	Rated Power (W) (70°C)	Limiting Element Voltage (V)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200		
MNR15	1608 (0603)×5	10	8	0.031/Element	12.5	J (±5%)	±200	56 Ω to 100k Ω (E24 series)	55 to 1125	YES		
MNR18	1605 (0602)×8	16	8	0.063/Element*	25	J (±5%)	±200	10 Ω to 1M Ω (E24 series)	-55 to +125	YES		
*Power for a pack	ing Max 0.25W in a	all elements	;									

Jumper	type				
Part No.	Size Code mm (inch)	Rated Current	Resistance	Operating Temperature (°C)	Automotive Grac AEC-Q200
MNR18	1605 (0602)×8	1A/Element*	50mΩ Max	-55 to +125	YES

*Power for a packing Max 4A in all elements

Dimensions (Unit: mm)



Part No. Explanation



Packaging Specifications Code

Part No.	Code	Tolerance J (±5%)	Packaging Specifications	Reel	Basic Ordering Unit (pcs)
MNR15	E0RP	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000
MNR18	E0AP	O	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000

Class-leading Compact Size Chip Resistors (RASMID™ series) **Ultra-Compact Chip Resistors (SMR003)**

Original process technology ensures greater accuracy

- Chip dimensional precision improved from ±20µm to ±10µm
- · Gold electrodes utilized for superior solderability and reliability



*Minimum order quantity is further discussion is needed

SMR003

R

SMR003	<009005>							
Part No.	Size Code mm (inch)	Rated Power (W) (70°C)	Limiting Element Voltage (V)	Tolerance	Temperature Coefficient (ppm/°C)	Resistance Range	Operating Temperature (°C)	Automotive Grade AEC-Q200
SMD003	03015	0.02	10	F (±1%)	+200	10 to 1M Ω (E24, E96 series)	-55 to +125	_
300000	(009005)	0.02	10	J (±5%)	1200	10 to 1M Ω (E24 series)	-55 10 +125	

*E24: Standard products E96: Custom products

Jumper t	Jumper type									
Part No.	Size Code mm (inch)	Rated Current (A)	Resistance	Operating Temperature (°C)	Automotive Grade AEC-Q200					
SMR003	03015 (009005)	0.5	$50m\Omega$ Max	-55 to +125	-					

Dimensions (Unit: mm)

Part No.	Size Code mm (inch)	L	w	t	а	b
SMR003	03015 (009005)	0.30±0.01	0.15±0.01	0.11±0.01	-	0.07±0.01





Part No. Explanation



Packaging Specifications Code

Port No	Cada	Tolerance		Pookoging Specifications	Real	Basic Ordering Unit	
Fart NO.	Code	J (±5%)	F (±1%)	Fackaging opecifications	neer	(pcs)	
SMR003	RX	O	O	Embossed tape (1mm Pitch)	φ180mm (7inch)	40,000*	

Here (proximity, comparises and a second se

Standard Nominal Resistance Values etc.

E3	10			22			47					
E6	1	0	1	5	2	2	3	3	4	7	6	8
E12	10	12	15	18	22	27	33	39	47	56	68	82
E24	10	11	12	13	15	16	18	20	22	24	27	30
	33	36	39	43	47	51	56	62	68	75	82	91
E96	100	102	105	107	110	113	115	118	121	124	127	130
	133	137	140	143	147	150	154	158	162	165	169	174
	178	182	187	191	196	200	205	210	215	221	226	232
	237	243	249	255	261	267	274	280	287	294	301	309
	316	324	332	340	348	357	365	374	383	392	402	412
	422	432	442	453	464	475	487	499	511	523	536	549
	562	576	590	604	619	634	649	665	681	698	715	732
	750	768	787	806	825	845	866	887	909	931	953	976

Nominal Resistance

Resistors of a series fall into one of nominal resistance ranges shown in the table above. Nominal resistance is determined by the common ratio shown right.

Resistance Coding

Nominal resistance is expressed in 3 digits when the resistance tolerance is $\pm 5\%$ and in 4 digits when $\pm 0.5\%$, $\pm 1\%$, $\pm 2\%$.

The leading 2 or 3 digits indicate significant figure while the last digit indicates the number of zeros. The letter R or L denotes the decimal point if necessary.

Series

E6

E12

F24

E96

Ex.1 $22\Omega \rightarrow 22 \times 10^{\circ}\Omega \rightarrow \underline{220}$ (the last digit indicates the number "0" of a multiplier)

Ex.2 $47k\Omega \rightarrow 47 \times 10^{3}\Omega \rightarrow \underline{473}$ (the last digit indicates the number "3" of a multiplier)

Ex.3 1.2M $\Omega \rightarrow 12 \times 10^{5} \Omega \rightarrow \underline{125}$ (the last digit indicates the number "5" of a multiplier)

Ex.4 2.7 Ω ->2R7 (the decimal point indicate the letter R/the letter R apply to the low Resistance less than 10 Ω)

Ex.5 $1130\Omega \rightarrow 113 \times 10^1\Omega \rightarrow \underline{1131}$ (the last digit indicates the number "1" of a multiplier/Resistance Tolerance 1% (F) products)

Ex.6 $0.10\Omega \rightarrow R10$ Ex.7 $1m\Omega \rightarrow 1L0$

Supplement of Rated Power

Derating curves based on ambient temperature.
When the ambient temperature exceeds the rated ambient temperature,



• Derating curves based on the terminal temperature. When the terminal temperature with load exceeds the rated terminal temperature, derate the load power based on the derating curve.



■ For basic guidelines on using resistors, see the technical reports issued by Japan Electronics and Information Technology Industries Association. JEITA RCR-2121A. "Guideline of notabilia for fixed resistors for use in electronic equipment (Safety Application Guide for fixed resistors for use in electronic equipment)"

Remarks

Rounded off to a 2-digit figure.

Rounded off to a 3-digit figure.

Common ratio

⁶√10≈1.46

¹²√10≈1.21

²⁴√10≈1.10

⁹⁶√10≈1.02

Supplementary to Notes

*1 When resistor is to be exposed to a transient load (excessive large load, such as pulse), mount the resistor on your product and check the condition and evaluate the result. Constant application of a voltage above the rated voltage will degrade the performance and reliability of the resistor.

Do not apply a voltage exceeding the rated voltage across any ROHM resistors.

*² Rated voltage (V) = $\sqrt{\text{rated power (W)} \times \text{nominal resistance }(\Omega)}$ or the limiting element voltage, whichever smaller, is the rated voltage.

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