






















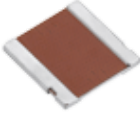




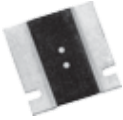





































Series	I-Button	Product Image	Function	Type	Description	Mounting	Min. Tolerance (%)	TCR (ppm/C)	Resistance (min) (ohm)	Resistance (max) (ohm)
303119Z, 303119	 Datasheet 		Resistors	Resistors, Fixed	Current Sensing Fixed Foil Resistor Chips VCS1625Z/ VCS1625 Configuration, Screen/Test Flow in Compliance with EEE-INST-002 Level 1 and MIL-PRF-55342	Surface Mount	0.2	15.0 0.05	0.3	10
303133, 303134, 303135, 303136, 303137, 303138	 Datasheet 		Resistors	Resistors, Fixed	Ultra High Precision Surface Mount Chip Resistors, VSMP Z-Foil Technology Configuration, Screen/Test Flow in Compliance with EEE-INST-002 and MIL-PRF-55342	Surface Mount	0.02	0.05	10	75K
303139, 303140	 Datasheet 		Resistors	Resistors, Fixed	Molded Surface Mount Space and Military Grade Resistors SMRxDZ, Screen/Test Flow in Compliance with EEE-INST-002, Level 1 and MIL-PRF-55182	Surface Mount	0.01	0.05	5	40K 14K
303144, 303145	 Datasheet 		Resistors	Resistors, Fixed	Fixed Resistors CSM2512 and CSM3637 with Screen/Test Flow in Compliance with EEE-INST-002 (Tables 2A and 3A, Film/Foil, Level 1) MIL-PRF-55342 and MIL-PRF-49465	Surface Mount	0.1	15.0	2m	200m
303261, 303262, 303263, 303264, 303265, 303266	 Datasheet 		Resistors	Resistors, Fixed	Ultra High-Precision Wrap-Around Chip Resistors, FRSM Z-1 Foil Technology Configuration Screen/Test Flow in Compliance with EEE-INST-002 and MIL-PRF-55342	Surface Mount	0.01	0.05	10	75K
303337	 Datasheet 		Resistors	Resistors, Fixed	Model 303337 Bulk Metal® Foil Technology CSM3634F, with Screen/Test Flow in compliance with EEE-INST-002 (Tables 2A and 3A, Film/Foil, Level 1) MIL-PRF-55342 and MIL-PRF-49465	Surface Mount	0.1	10.0	0.05	0.2
CSM2512 & CSM3637	 Datasheet  POP9		Resistors	Resistors, Fixed	High Precision Metal Strip Resistor (4-Terminal)	Surface Mount	0.1	15.0	0.001	0.2

Series	I-Button	Product Image	Function	Type	Description	Mounting	Min. Tolerance (%)	TCR (ppm/C)	Resistance (min) (ohm)	Resistance (max) (ohm)
 			 	 	 	 	 	 	 	 
CSM2512S	 Datasheet  POP9		Resistors	Resistors, Fixed	Bulk Metal® Technology High Precision, Current Sensing, Power Surface Mount, Metal Strip Resistor with Improved Stability 0.05 %, Resistance Value from 10 mR	Surface Mount	0.1	15.0	0.003	0.1
CSM3637F	 Datasheet 		Resistors	Resistors, Fixed	Bulk Metal® Foil Technology High Precision, Current Sensing, Power Surface Mount Resistor with Rated Power up to 3 W and TCR ±10 ppm/°C	Surface Mount	0.1	10.0	0.02	0.2
CSM3637P	 Datasheet 		Resistors	Resistors, Fixed	Bulk Metal® Foil Technology Ultra High Precision, Current Sensing, Power Surface Mount, Metal Strip Resistor with Improved Rated Power to 5W, Max Current to 40A, Resistance Value from 3 mR, TCR to ± 15 ppm/ °C Max	Surface Mount	0.1	15.0	3m	100m
CSM3637S	 Datasheet 		Resistors	Resistors, Fixed	Bulk Metal Technology High Precision Current Sensing Power Surface Mount Strip Resistor	Surface Mount	0.2	20.0	10m	100m
CSM3637Z	 Datasheet  POP9		Resistors	Resistors, Fixed	Bulk Metal® Foil Technology Ultra High Precision, Current Sensing, Power Surface Mount, Metal Strip Resistor with Improved TCR to ±5 ppm/ °C Max	Surface Mount	0.1	5.0	3m	50m
DSM	 Datasheet 		Networks	Resistor Networks	High Precision Surface Mount Molded Voltage Divider	Surface Mount	0.01	2.0	100	20K
DSMZ (Z-Foil)	 Datasheet  POP9		Networks	Resistor Networks	Ultra High Precision Surface Mount Molded Voltage Divider	Surface Mount	0.01	0.05	100	10K
FRFC Series 0805, 1206, 1506, 2010, 2512 (Z1 Foil Technology)	 Datasheet 		Resistors	Resistors, Fixed	Precision Z1 Foil Technology Flip Chip Resistor for Load Life Stability of 0.005% (50 ppm) with TCR of ± 0.2, 35% Space Saving vs. Wraparound Design, Power to 750mW	Surface Mount	0.01	0.05	5	8K 25K 30K 70K 125K

Series	Button	Image	Resistors Function	Resistors Type	Ultra High-Precision Foil Description	Surface Mounting	Min. Tolerance (%)	2.5 TCR (ppm/C)	Resistance (min) (ohm)	Resistance (max) (ohm)
FRSG Series (Series Technology) 0603, 0805, 1206, 1506, 2010, 2512					Ultra High-Precision Foil Wraparound Surface Mount Chip Resistor with Gold Plated Terminals for High Temperature Applications up to +225°C					
FRSH Series (Z1-Foil)			Resistors	Resistors, Fixed	Ultra High Precision Foil Wraparound Surface Mount Chip Resistor with Extended Pads for High Power/High Temperature Applications up to +225 °C, Load Life Stability of 0.05% ,TCR to ± 1ppm/ °C	Surface Mount	0.02	2.5	10	25K
										30K
										70K
										125K
								100	5K	
								10	8K	
FRSM Series (Z1 Foil Technology)			Resistors	Resistors, Fixed	Ultra High-Precision FRSM Wrap-Around Chip Resistors, Z1 Foil Technology Configuration with TCR of ±0.05 ppm/°C and Improved Load-Life Stability of 0.0025% (25 ppm)	Surface Mount	0.01	0.2	5	125K
										5K
										8K
										25K
										30K
								5	70K	
FRST Series (Z1 Foil Technology) (0603, 0805, 1206, 1506, 2010, 2512)			Resistors	Resistors, Fixed	Ultra High-Precision Foil Wraparound Surface Mount Chip Resistor for High Temperature Applications up to +200°C, Humidity Proof (85°C/85% RH) to 0.005%, Stability Under Load of 0.02%	Surface Mount	0.01	2.5	5	125K
										4K
										8K
										25K
										30K
								5	70K	
HTHA Series (Z1-Foil)			Resistors	Resistors, Fixed	Ultra High Precision Z1-Foil Technology Aluminum Wire Bondable Chip or Flip Chip Resistor for Hybrid Circuits for High Temperature Applications up to +240 °C, Long Term Stability of 0.05%, TCR to ± 1ppm/ °C	Surface Mount	0.02	2.5	5	125K
										5K
										8K
										25K
										30K
								5	70K	
HTHG Series (Z1-Foil)			Resistors	Resistors, Fixed	Ultra High Precision Z1-Foil Technology Gold Wire Bondable Chip Resistor for Hybrid Circuits for High Temperature Applications up to +240 °C, Long Term Stability of 0.05%, TCR to ± 1ppm/ °C	Surface Mount	0.02	2.5	5	125K
										10K
										30K
										80K
										5K
										8K
								5	25K	
									70K	

LED Resistors (Z-Foil) Series	1-Button Datasheet	Pro. Package	Resistors, Fixed Function	Resistors Type	Ultra High Precision LED Bulk Metal Foil Resistors Description	Surface Mounting	0.1% Min. Tolerance (%)	3.0 TCR (ppm/C)	0.2 Resistance (min) (ohm)	500 Resistance (max) (ohm)
							0.2			10
Military and Space Applications	Datasheet		Resistors	Resistors, Fixed	Military and Space Applications	Surface Mount	0.01	0.2	2m	150K
SMN	Datasheet		Networks	Resistors, Fixed	High Precision Surface Mount 4 Resistor Network Dual-In-Line Package with TCR Tracking ≤ 0.5 ppm/ $^{\circ}$ C, Tolerance Match of 0.01% and Ratio Stability of 0.005%	Surface Mount	0.01	2.0	100	10K
SMNH	Datasheet		Networks	Resistor Networks	Ultra High Precision 4 Resistor Surface Mount Hermetic Network	Surface Mount	0.005	2.0	5	33K
SMNZ (Z-Foil)	Datasheet		Networks	Resistors, Fixed	Ultra High Precision 4 Resistor Surface Mount Network Dual-In-Line Molded Package	Surface Mount	0.01	0.05	100	10K
SMR1D & SMR3D	Datasheet		Resistors	Resistors, Fixed	Precision Molded Surface Mount Resistor	Surface Mount	0.01	2.0	5	80K 33K
SMR1DZ & SMR3DZ (Z-Foil)	Datasheet		Resistors	Resistors, Fixed	Ultra High Precision Z-Foil Molded Surface Mount Resistor	Surface Mount	0.01	0.05	5	80K 33K
SMR3P (Z1-Foil)	Datasheet		Resistors	Resistors, Fixed	Ultra High Precision Industrial Grade Molded Surface Mount Resistor	Surface Mount	0.01	0.5	100	15K
SMR3Z1 (Z1 Foil Technology)	Datasheet		Resistors	Resistors, Fixed	Ultra High Precision Z1 Foil Technology - Molded Surface Mount Resistor with Flexible Terminations	Surface Mount	0.01	0.05	5	80K
V5x5, V15x5 & V15x10	Datasheet		Resistors	Resistors, Fixed	Hybrid Chips (Gold Plated Pads)	Surface Mount	0.005	5.0	5	80K 10K 33K
V5x5Z, V15x5Z (Z-Foil)	Datasheet		Resistors	Resistors, Fixed	Z Foil Hybrid Chips (Gold Plated Pads)	Surface Mount	0.01	2.0	50	30K 5K
VCS1610	Datasheet		Resistors	Resistors, Fixed	High Precision, Current Sensing Chip Resistor (4-Terminal)	Surface Mount	0.5	15.0	0.1	1.0

VCS1610Z Series	 Datasheet 		Resistors Function	Resistors, Fixed Type	High Precision, Current Sensing Chip Resistor (4- Terminal) Description	Surface Mounting Mounting	Min. Tolerance (%)	0.2 TCR (ppm/C)	0.2 Resistance (min) (ohm)	10 Resistance (max) (ohm)
										
VCS1625	 Datasheet  POP9		Resistors	Resistors, Fixed	High Precision, Current Sensing Chip Resistor (4- Terminal)	Surface Mount	0.1	2.0	0.01	1.0
VCS1625P	 Datasheet 		Resistors	Resistors, Fixed	High Precision Surface Mount Current Sensing Chip Resistor with Power Rating to 1 W, Temperature Coefficient of Resistance of \pm 2 ppm/ °C and Load Life Stability of \pm 0.015%	Surface Mount	0.1	2.0	10m	10
VCS1625Z (Z-Foil)	 Datasheet  POP9		Resistors	Resistors, Fixed	High Precision Power Current Sense Resistors Z-based	Surface Mount	0.1	0.05	0.3	1
VCS1625ZP	 Datasheet 		Resistors	Resistors, Fixed	Ultra High Precision Z-Foil Surface Mount Current Sensing	Surface Mount	0.2	0.05	0.3	10
VFCD 1505 Integrated Construction (Z-Foil)	 Datasheet 		Networks	Networks	Ultra Precision Flip Chip Resistor, Special Design	Surface Mount	0.01	0.05	1K	10K
VFCP Series (Z-Foil)	 Datasheet 		Resistors	Resistors, Fixed	Ultra High- Precision Z-Foil Flip Chip Resistor	Surface Mount	0.01	0.05	10	100K
										12K
										30K
										40K
										150K
VPR220S & VPR221S	 Datasheet 		Resistors	Resistors, Fixed	Precision Foil Power Resistor, TO 220 Configuration, 4- Terminal Connection	Surface Mount	0.01	2.0	0.5	10K
									5	500
VPR220SZ (Z Foil)	 Datasheet 		Resistors	Resistors, Fixed	Precision Foil Power Resistor, TO-220 Configuration	Surface Mount	0.01	0.05	5	10K
VPR221SZ (Z-Foil)	 Datasheet 		Resistors	Resistors, Fixed	Ultra High Precision Z-Foil Power Current Sense Resistors	Surface Mount	0.01	0.05	0.5	500
VSM Series	 Datasheet 		Resistors	Resistors, Fixed	Precision Chip Resistor	Surface Mount	0.01	2.0	10	12K
										150K
										30K
										40K
									100K	

VSM40, 42, 45-46 Series	 Datasheet 	 Package	Networks Function	Resistor Networks	 Description  Mounting  Tolerance (%)  TCR (ppm/C)  Resistance (min) (ohm)  Resistance (max) (ohm)	Surface Mounting	0.005	2.0	5.0	80K
					 Description  Mounting  Tolerance (%)  TCR (ppm/C)  Resistance (min) (ohm)  Resistance (max) (ohm)					
VSM85, 86, 87, 88, 89	 Datasheet 	 Package	Networks	Resistor Networks	Bulk Metal® Foil Technology Surface Mount Hermetic Resistor Networks In Gull Wing Configuration	Surface Mount	0.005	2.0	5.0	80K
VSMP Series (Z Foil)	 Datasheet  POP9		Resistors	Resistors, Fixed	Ultra High Precision Z Foil Chip Resistors (0603, 0805, 1206, 1506, 2010 & 2512 sizes)	Surface Mount	0.01	0.05	10	12K
										150K
										30K
										40K
										100K
100	5K									