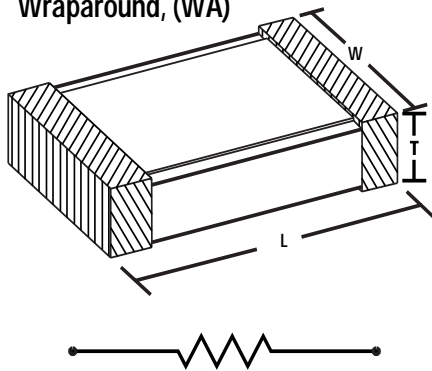


# QPL SERIES RESISTORS

## DESCRIPTION

QPL thick film resistors are printed and fired on 96% Alumina with a five sided wraparound termination. All case sizes are offered to fit a variety of HI-Rel hybrid microelectronic applications. Advanced processing techniques and, HI-Rel Construction assure optimum performance where TCR, VCR and operating power are critical factors. All styles meet and exceed the qualification requirements of MIL-PRF-55342.

Wraparound, (WA)

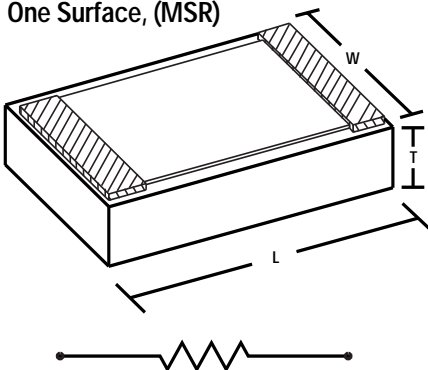


## WRAPAROUND

QPL DESIGNATION	STYLE	LENGTH		WIDTH		THICKNESS Max		VOLTAGE RATING	POWER RATING
		(in)	(mm)	(in)	(mm)	(in)	(mm)		
M55342M01	RM0502	0.055	1.400	0.025	0.635	0.033	0.838	40V	0.020W
M55342K02	RM0505	0.055	1.400	0.050	1.270	0.033	0.838	40V	0.050W
M55342K03	RM1005	0.105	2.670	0.050	1.270	0.033	0.838	40V	0.100W
M55342K04	RM1505	0.155	3.940	0.050	1.270	0.033	0.838	40V	0.150W
M55342K05	RM2208	0.230	5.840	0.075	1.905	0.033	0.838	40V	0.225W
M55342K06	RM0705	0.080	2.030	0.050	1.270	0.033	0.838	50V	0.100W
D55342K07	RM1206	0.126	3.200	0.063	1.600	0.033	0.838	100V	0.250W
M55342K08	RM2010	0.209	5.310	0.098	2.489	0.033	0.838	150V	0.800W
M55342K09	RM2512	0.259	6.580	0.124	3.150	0.033	0.838	200V	1W
M55342K10	RM1010	0.105	2.670	0.100	2.540	0.033	0.838	75V	0.500W

Power rating at 70°C derated linearly to (0) power at 150°C. (P = E<sup>2</sup>/R)

One Surface, (MSR)



## ONE SURFACE

QPL SIZE DESIGNATION	STYLE	LENGTH		WIDTH		THICKNESS Max		VOLTAGE RATING	POWER RATING
		(in)	(mm)	(in)	(mm)	(in)	(mm)		
M55342M01	RM0502	0.050	1.270	0.025	0.635	0.030	0.762	40V	0.020W
M55342K02	RM0505	0.050	1.270	0.050	1.270	0.030	0.762	40V	0.050W
M55342K03	RM1005	0.100	2.540	0.050	1.270	0.030	0.762	40V	0.100W
M55342K04	RM1505	0.150	3.810	0.050	1.270	0.030	0.762	40V	0.150W
M55342K05	RM2208	0.225	5.715	0.075	1.905	0.030	0.762	40V	0.225W
M55342K06	RM0705	0.075	1.905	0.050	1.270	0.030	0.762	50V	0.100W
D55342K07	RM1206	0.126	3.200	0.063	1.600	0.030	0.762	100V	0.250W
M55342K08	RM2010	0.206	5.232	0.098	2.489	0.030	0.762	150V	0.800W
M55342K09	RM2512	0.248	6.299	0.124	3.150	0.030	0.762	200V	1W
M55342K10	RM1010	0.100	2.540	0.100	2.540	0.030	0.762	75V	0.500W

Power rating at 70°C derated linearly to (0) power at 150°C. (P = E<sup>2</sup>/R)

## ELECTRICAL PERFORMANCE CHARACTERISTICS

### MIL-PRF-55342 TEST

### MIL-PRF-55342 REQUIREMENT

### MSI TYPICAL

Short Term Overload	±0.25%	±0.03%
High Temperature Exposure	±0.50%	±0.05%
Thermal Shock	±0.50%	±0.07%
Low Temperature Operation	±0.25%	±0.05%
Resistance to Bonding Exposure	±0.25%	±0.09%
Moisture Resistance	±0.50%	±0.06%
Stability (Life 70°C 1,000Hrs)	±0.50%	±0.04%
Stability (Life 70°C 10,000Hrs)	±2.00%	±0.07%



**THICK FILM DIVISION**

MADE IN AMERICA

8021 Rev B 0399

# QPL SERIES RESISTORS

## QPL CERTIFIED RESISTOR STYLES

QPL DESIGNATION	TERMINATION	CHAR.	RESISTANCE*		TOLERANCE (%)	LIFE FAILURE RATE	POWER RATING	VOLTAGE	DIMENSIONS
			Min.	Max.					
M55342M01	W, T, U, B	M	10Ω	100KΩ	1, 2, 5	M, P, R, S	20mW Max.	40 Volts	MSR-0.050" x 0.025" WA-0.055" x 0.025"
			5.6Ω	100KΩ	10				
M55342K02	W, T, U, B	K	49.9Ω	475KΩ	1	M, P, R, S	50mW Max.	40 Volts	MSR-0.050" x 0.050" WA-0.055" x 0.050"
			49.9Ω	470KΩ	2, 5				
			49Ω	470KΩ	10				
		M	10Ω	475KΩ	1				
			10Ω	470KΩ	1, 2, 5				
			5.6Ω	470KΩ	10				
M55342K03	W, T, U, B	K	49.9Ω	1MΩ	1, 2, 5, 10	M, P, R, S	100mW Max.	40 Volts	MSR-0.100" x 0.050" WA-0.105" x 0.050"
		M	10Ω	1MΩ	1, 2, 5				
			5.6Ω	1MΩ	10				
M55342K04	W, T, U, B	K	49.9Ω	1MΩ	1, 2, 5, 10	M, P, R, S	150mW Max.	40 Volts	MSR-0.150" x 0.050" WA-0.155" x 0.050"
		M	10Ω	1MΩ	1, 2, 5				
			5.6Ω	1MΩ	10				
M55342K05	W, T, U, B	K	49.9Ω	1MΩ	1, 2, 5, 10	M, P, R, S	225mW Max.	40 Volts	MSR-0.225" x 0.075" WA-0.230" x 0.075"
		M	10Ω	1MΩ	1, 2, 5				
			5.6Ω	1MΩ	10				
M55342K06	W, T, U, B	K	49.9Ω	1MΩ	1, 2, 5, 10	M, P, R	100mW Max.	50 Volts	MSR-0.75" x 0.050" WA-0.080" x 0.050"
		M	10Ω	1MΩ	1, 2, 5				
			5.6Ω	1MΩ	10				
D55342K07	W, T, U, B, C, D	K	5.6Ω	1MΩ	1, 2, 5, 10	M, P, R, S	250mW Max.	100 Volts	MSR-0.126" x 0.063" WA-0.126" x 0.063"
			5.6Ω	1MΩ	2				
		M	5.6Ω	5.1MΩ	5				
			5.6Ω	5.6MΩ	10				
M55342K08	W, T, U, B, C, D	K	5.6Ω	2MΩ	1, 2, 5, 10	M, P, R, S	800mW Max.	150 Volts	MSR-0.206" x 0.098" WA-0.209" x 0.098"
		M	5.6Ω	7.5MΩ	1				
			5.6Ω	15MΩ	2, 5, 10				
M55342K09	W, T, U, B, C, D	K	5.6Ω	2MΩ	1, 2, 5, 10	M, P, R, S	1W Max.	200 Volts	MSR-0.248" x 0.124" WA-0.259" x 0.124"
		M	5.6Ω	15MΩ	1, 2, 5, 10				
M55342K10	W, T, U, B	K	15Ω	1MΩ	1, 2, 5, 10	M, P, R, S	500mW Max.	75 Volts	MSR-0.100" x 0.100" WA-0.105" x 0.100"
		M	5.6Ω	5.62MΩ	1, 2, 5, 10				

\*CONSULT TABLE IV OF MIL-PRF-55342 OR MSI SALES FOR STANDARD RESISTANCE VALUES

## QPL PART NUMBER SYSTEM

EXAMPLE: M55342M01B10E0S

(D) or (M)55342	M	01	B			10E0	S
MILITARY SPEC. INDICATING MIL-PRF-55342	CHARACTERISTIC K = ±100ppm M = ±300ppm 70°C Max. ambient temperature at rated wattage	QPL DESIGNATION	TERMINATION MATERIAL			VALUE AND TOLERANCE	LIFE FAILURE RATE
			CODE	MATERIAL	AREA		
			W	GOLD	ONE SURFACE		M = 1.0% / 1,000 Hrs.
			T	PLATINUM GOLD	ONE SURFACE		P = 0.1% / 1,000 Hrs.
			U	PLATINUM GOLD	WRAPAROUND		R = 0.01% / 1,000 Hrs.
			B	SOLDER COATED	WRAPAROUND		S = 0.001% / 1,000 Hrs.
				NICKEL BARRIER			
			C	PALLADIUM SILVER	WRAPAROUND		
			D	PALLADIUM SILVER	ONE SURFACE		



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