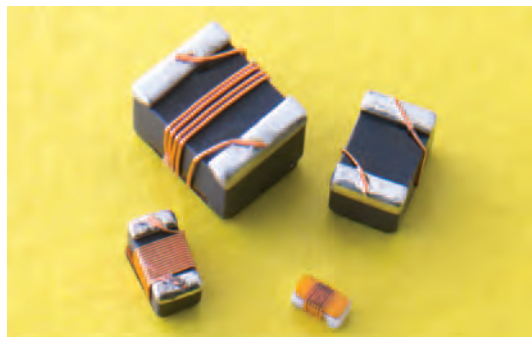


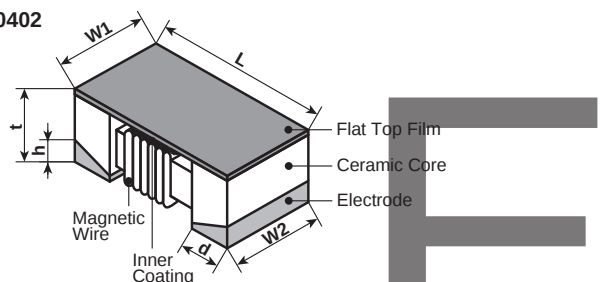


features

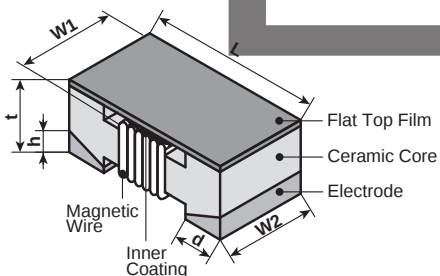
- Surface mount
- Operating temperature: -40°C ~ +125°C
- Flat top suitable for high speed pick-and-place components
- Excellent high frequency applications
- High Q factors and self-resonant frequency values
- Products with lead-free terminations meet EU RoHS requirements
- AEC-Q200 Tested

dimensions and construction

0402



0603, 0805, 1008



Size Code	Dimensions inches (mm)					
	L	W1	W2	t	h	d
KQT0402	.039±.004 (1.0±0.1)	.02±.004 (0.5±0.1)	.02±.004 (0.5±0.1)	.022±.004 (0.55±0.1)	.006±.004 (0.15±0.1)	.01±.004 (0.25±0.1)
KQ0603	.063±.004 (1.6±0.1)	.039±.004 (1.0±0.1)	.033±.004 (0.85±0.1)	.035±.004 (0.9±0.1)	.01±.006 (0.25±0.15)	.014±.004 (0.35±0.1)
KQ0805	.079±.008 (2.0±0.2)	.059±.008 (1.5±0.2) (3.3nH-390nH) .063±.008 (1.6±0.2) (470nH-820nH)	.053±.004 (1.35±0.1)	.051±.008 (1.3±0.2)	.016±.006 (0.40±0.15)	.018±.004 (0.45±0.1)
KQ1008	.098±.008 (2.5±0.2)	.087±.008 (2.2±0.2)	.079±.004 (2.0±0.1)	.071 ^{+.008} ₋₀ (1.8 ^{+.02} ₋₀)	.018±.006 (0.45±0.15)	.018±.004 (0.45±0.1)

ordering information

KQ	1008	T	TE	10N	J
Type	Size Code	Termination Material	Packaging	Nominal Inductance	Tolerance
KQ KQT	0402 0603 0805 1008	T: Sn	TP: 2mm pitch paper (0402: 10,000 pieces/reel) TD: 7" paper tape (0402: 2,000 pieces/reel) TE: 7" embossed plastic (0603, 0805, 1008: 2,000 pieces/reel)	3 digits: 10N: 10nH R10: 0.1μH 1R0: 1.0μH	B: ±0.1nH C: ±0.2nH G: ±2% H: ±3% J: ±5% K: ±10% M: ±20%

For further information
on packaging, please
refer to Appendix A.

applications and ratings

Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency (MHz)	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	
KQT0402T**1N0*	—	1.0	250	B: ±0.1nH C: ±0.2nH	16	250	11000	0.045	1360	
KQT0402T**1N9*		1.9					9600	0.070	1040	
KQT0402T**2N0*		2.0			8000					0.068
KQT0402T**2N2*		2.2						0.120	700	
KQT0402T**2N4*		2.4		18						
KQT0402T**2N7*		2.7			17					
KQT0402T**3N3*		3.3		19				7200	0.066	840
KQT0402T**3N6*		3.6								
KQT0402T**3N9*		3.9		18				6000	0.091	800
KQT0402T**4N3*		4.3								
KQT0402T**4N7*		4.7		20				5800	0.083	760
KQT0402T**5N1*		5.1								
KQT0402T**5N6*		5.6		22				4800	0.086	680
KQT0402T**6N2*		6.2								
KQT0402T**6N8*		6.8		20				5800	0.104	650
KQT0402T**7N5*		7.5						4400		
KQT0402T**8N2*		8.2		22				4200	0.150	650
KQT0402T**8N7*		8.7						4160	0.104	680
KQT0402T**9N0*		9.0		20				4000	0.150	650
KQT0402T**9N5*		9.5						3900	0.195	480
KQT0402T**10N*		10		21				3680	0.120	640
KQT0402T**11N*		11						3600		
KQT0402T**12N*		12		24				3450	0.180	560
KQT0402T**13N*		13						3280	0.172	
KQT0402T**15N*		15		25				3100	0.200	500
KQT0402T**16N*		16							0.230	
KQT0402T**18N*		18		24				3040	0.202	480
KQT0402T**19N*		19						3000	0.250	450
KQT0402T**20N*		20		25				2800	0.323	400
KQT0402T**22N*		22						2720	0.214	
KQT0402T**23N*		23		24				2700	0.322	
KQT0402T**24N*		24						2480	0.298	
KQT0402T**27N*		27		25				2400	0.354	
KQT0402T**30N*		30							0.393	
KQT0402T**33N*		33		24				2320	0.550	340
KQT0402T**34N*		34							0.560	320
KQT0402T**36N*		36		25				2300	0.550	300
KQT0402T**39N*		39						2240	0.620	320
KQT0402T**40N*		40		25				2200	0.810	300
KQT0402T**43N*		43						2100	0.830	150
KQT0402T**47N*		47		20					0.835	240
KQT0402T**51N*		51		25				2800	1.170	200
KQT0402T**56N*		56						2000	1.120	
KQT0402T**68N*		68		22				1800	1.810	140
KQT0402T**82N*		82						1600	2.090	130
KQT0402T**R10*		100		22				1500	2.320	120
KQT0402T**R12*		120								

* Add tolerance character (B, C, G, H, J, K, M)

** Add packaging code

applications and ratings (continued)

Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency (MHz)	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)
KQ0603TTE1N6*	C	1.6	250	J: ±5% K: ±10%	24	250	12500	0.03	700
KQ0603TTE1N8*	0	1.8			16			0.045	
KQ0603TTE3N3*	X	3.3			22		6900	0.055	
KQ0603TTE3N6*	E	3.6						0.063	
KQ0603TTE3N9*	1	3.9						0.08	
KQ0603TTE4N3*	F	4.3					5900	0.063	
KQ0603TTE4N7*	G	4.7			20		5800	0.116	
KQ0603TTE5N1*	Y	5.1						0.115	
KQ0603TTE6N8*	2	6.8			27		0.11		
KQ0603TTE7N5*	H	7.5			28		4800	0.106	
KQ0603TTE8N2*	A	8.2					4600	0.12	
KQ0603TTE8N7*	J	8.7			31		4800	0.109	
KQ0603TTE9N5*	B	9.5		0.125					
KQ0603TTE10N*	3	10		33	4000	0.13			
KQ0603TTE11N*	K	11		35		0.086			
KQ0603TTE12N*	4	12		34	3300	0.13			
KQ0603TTE15N*	5	15				0.17			
KQ0603TTE16N*	L	16		35	3100	0.104			
KQ0603TTE18N*	6	18		38	3000	0.17			
KQ0603TTE22N*	7	22		37	2700	0.19			
KQ0603TTE23N*	S	23			2650	0.15			
KQ0603TTE24N*	M	24	40	2800	0.135				
KQ0603TTE27N*	8	27	37	2250	0.22				
KQ0603TTE30N*	N	30	40	2300	0.144				
KQ0603TTE33N*	9	33	38	2080	0.22				
KQ0603TTE36N*	P	36	40	2200	0.25				
KQ0603TTE39N*	0	39	39						
KQ0603TTE43N*	Q	43	200	200	2000	0.28			
KQ0603TTE47N*	1	47			38	1900	0.30		
KQ0603TTE51N*	T	51					0.31		
KQ0603TTE56N*	2	56			37	0.34			
KQ0603TTE68N*	3	68	34	150	1700	0.49			
KQ0603TTE72N*	4	72			0.54				
KQ0603TTE82N*	5	82	32	150	1400	0.58			
KQ0603TTER10*	6	100			1350	0.61			
KQ0603TTER11*	7	110			1300	0.65			
KQ0603TTER12*	8	120			1400	0.65			
KQ0603TTER15*	9	150	100	100	1300	1.4			
KQ0603TTER18*	0	180			2000	2.2			
KQ0603TTER20*	U	200			1200	2.3			
KQ0603TTER21*	V	210				2.5			
KQ0603TTER22*	1	220			1000	2.4			
KQ0603TTER25*	W	250			900	2.3			
KQ0603TTER27*	2	270			840	3.17			
KQ0603TTER30*	X	300			800	3.0			
KQ0603TTER33*	3	330			700	3.7			
KQ0603TTER39*	4	390	30	50	640	1.21			
KQ0603TTER47*	5	470			610	1.26			
KQ0603TTER51*	V	510			560	2.09			
KQ0603TTER56*	6	560			590	1.89			
KQ0603TTER62*	W	620							

* Add tolerance character (B, C, G, H, J, K, M)

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7/25/24

applications and ratings (continued)

Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency (MHz)	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)
KQ0603TTER68*	7	680	50	J: ±5% K: ±10%	30	50	540	1.97	140
KQ0603TTER72*	C	720					530	2.04	130
KQ0603TTER75*	X	750					490	3.09	110
KQ0603TTER82*	8	820					480	2.95	120
KQ0603TTER91*	Y	910					440	5.13	90
KQ0603TTE1R0*	9	1000					400	5.45	80
KQ0603TTE1R2*	0	1200							
KQ0805TTE3N3*	0	3.3	250	J: ±5% K: ±10%	50	1500	6000	0.08	600
KQ0805TTE6N8*	1	6.8				1000	5500	0.11	
KQ0805TTE8N2*	2	8.2					4700	0.12	
KQ0805TTE12N*	3	12					4000	0.15	
KQ0805TTE15N*	4	15					3400	0.17	
KQ0805TTE18N*	5	18					3300	0.20	
KQ0805TTE20N*	Y	20							
KQ0805TTE22N*	6	22	200	J: ±5% K: ±10%	55		2600	0.22	500
KQ0805TTE27N*	7	27					2500	0.25	
KQ0805TTE33N*	8	33					2050	0.27	
KQ0805TTE39N*	9	39					2000	0.29	
KQ0805TTE43N*	4	43					1650	0.34	
KQ0805TTE47N*	0	47			60		1550	0.31	
KQ0805TTE56N*	1	56					1450	0.38	
KQ0805TTE68N*	2	68	150	G: ±2% J: ±5% K: ±10%			1300	0.42	400
KQ0805TTE82N*	3	82			65		1200	0.46	
KQ0805TTER10*	4	100					1100	0.51	
KQ0805TTER12*	5	120					920	0.56	
KQ0805TTER15*	6	150							
KQ0805TTER16*	H	160							
KQ0805TTER17*	J	170							
KQ0805TTER18*	7	180	100		50		870	0.64	350
KQ0805TTER19*	D	190							
KQ0805TTER20*	E	200							
KQ0805TTER21*	F	210							
KQ0805TTER22*	8	220							
KQ0805TTER23*	K	230							
KQ0805TTER24*	L	240							
KQ0805TTER25*	G	250							
KQ0805TTER27*	9	270			48				
KQ0805TTER33*	0	330					600	1.4	
KQ0805TTER39*	1	390	50	J: ±5% K: ±10%			560	1.5	290
KQ0805TTER47*	2	470			33	100	375	1.76	
KQ0805TTER56*	3	560					340	1.9	
KQ0805TTER68*	4	680					188	2.2	
KQ0805TTER72*	A	720			23	50	200	2.3	
KQ0805TTER82*	5	820					215	2.35	
KQ1008TTE10N*	10N	10	50	J: ±5% K: ±10% M: ±20%	50	500	4100	0.08	1000
KQ1008TTE12N*	12N	12					3300	0.09	
KQ1008TTE15N*	15N	15					3000	0.10	
KQ1008TTE18N*	18N	18					2500	0.11	
KQ1008TTE22N*	22N	22					2400	0.12	
KQ1008TTE27N*	27N	27			55	350	1600	0.13	
KQ1008TTE33N*	33N	33			60		1600	0.14	

* Add tolerance character (C, G, H, J, K, M)

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7/25/24

applications and ratings (continued)

Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency (MHz)	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)				
KQ1008TTE39N*	39N	39	50	J: ±5%,K:±10% M:±20%	60	350	1500	0.15	1000				
KQ1008TTE47N*	47N	47						0.16					
KQ1008TTE56N*	56N	56						0.18					
KQ1008TTE68N*	68N	68					0.20						
KQ1008TTE82N*	82N	82					0.22						
KQ1008TTER10*	R10	100	25	G: ±2% J: ±5% K: ±10%	60	100	1000	0.56	650				
KQ1008TTER12*	R12	120					950	0.63					
KQ1008TTER15*	R15	150			45		50	850		0.70	580		
KQ1008TTER18*	R18	180							750	0.77	620		
KQ1008TTER22*	R22	220							700	0.84	500		
KQ1008TTER27*	R27	270						600	0.91	500			
KQ1008TTER33*	R33	330						570	1.05	450			
KQ1008TTER39*	R39	390						500	1.12	470			
KQ1008TTER47*	R47	470						450	1.19				
KQ1008TTER56*	R56	560						415	1.33		400		
KQ1008TTER62*	R62	620						375	1.40	300			
KQ1008TTER68*	R68	680							1.47	400			
KQ1008TTER75*	R75	750							360	1.54	360		
KQ1008TTER82*	R82	820							350	1.61	400		
KQ1008TTER91*	R91	910							320	1.68	380		
KQ1008TTE1R0*	1R0	1000				7.9			35	50	290	1.75	370
KQ1008TTE1R2*	1R2	1200									250	1.6	310
KQ1008TTE1R5*	1R5	1500					200		1.7		300		
KQ1008TTE1R8*	1R8	1800					160		1.9		270		
KQ1008TTE2R2*	2R2	2200							2.2		250		
KQ1008TTE2R7*	2R7	2700							2.3				
KQ1008TTE3R3*	3R3	3300			22		25		110	2.7		230	
KQ1008TTE3R9*	3R9	3900			20				100	2.8			
KQ1008TTE4R7*	4R7	4700							90	3.1	210		
KQ1008TTE5R6*	5R6	5600					15		7.9	80	2.5	240	
KQ1008TTE6R8*	6R8	6800		70	2.8	200							
KQ1008TTE8R2*	8R2	8200		65	3.0	170							
KQ1008TTE100*	100	10000		60	3.4	150							

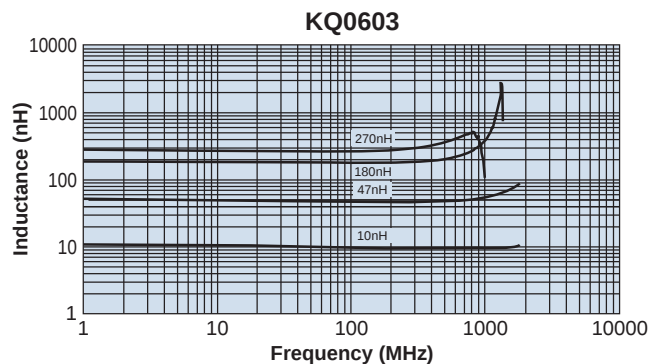
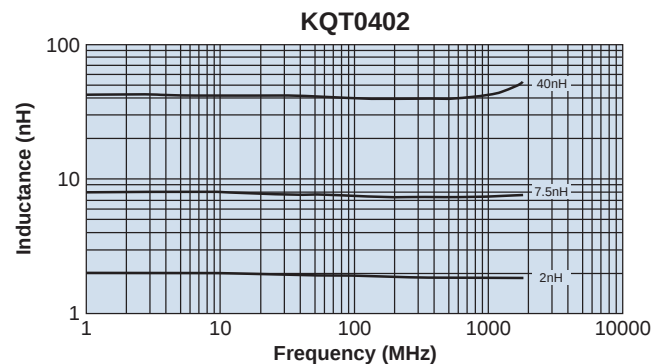
* Add tolerance character (C, G, H, J, K, M)

Operating Temperature Range: -40°C ~ +125°C

The operating temperature range of the coil (ambient temperature + self heating) must remain at +125°C or less

environmental applications

L-Frequency Characteristics

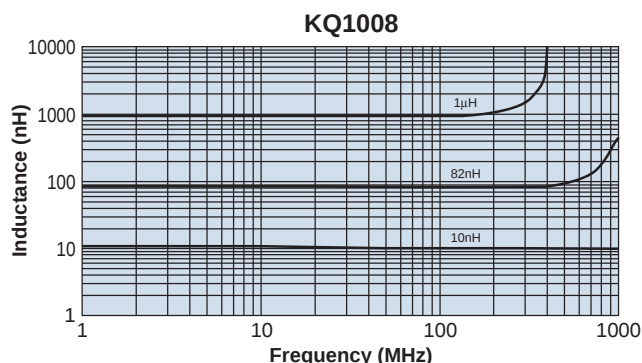
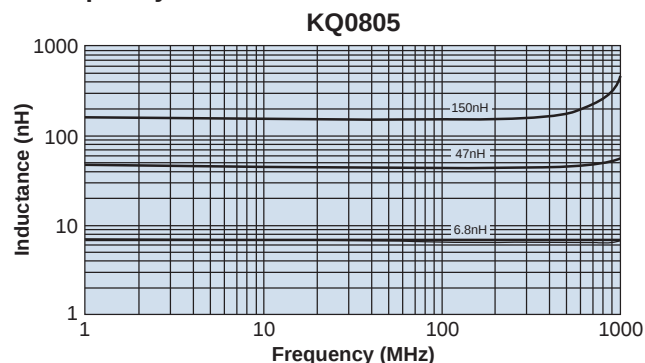


Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

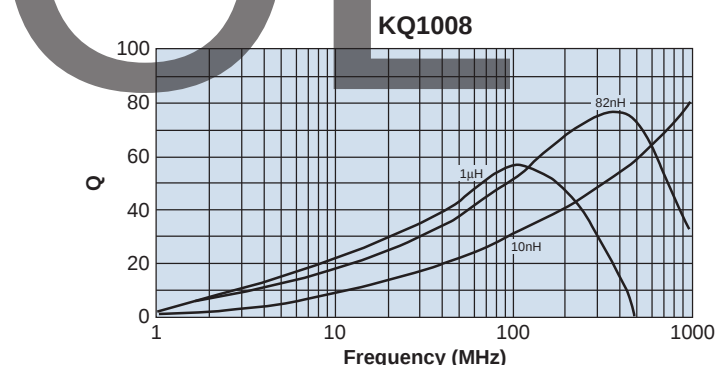
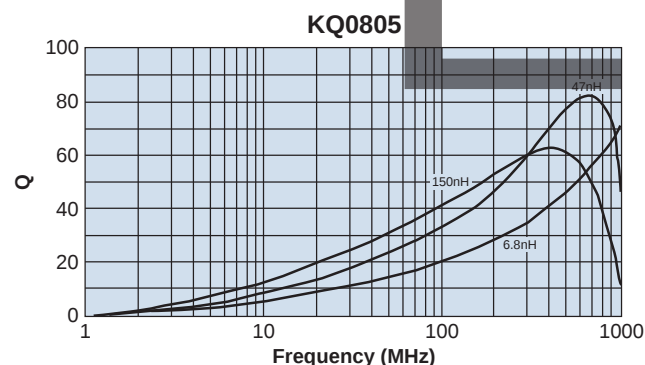
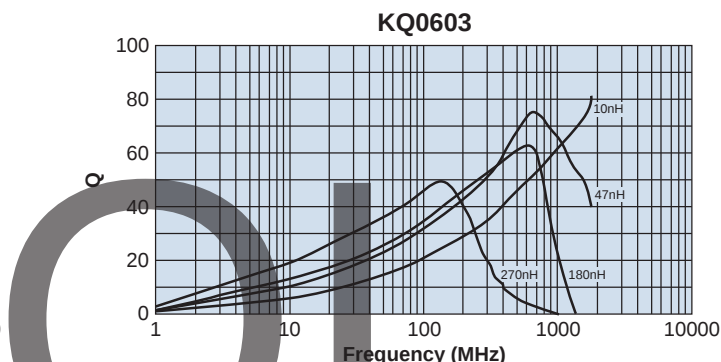
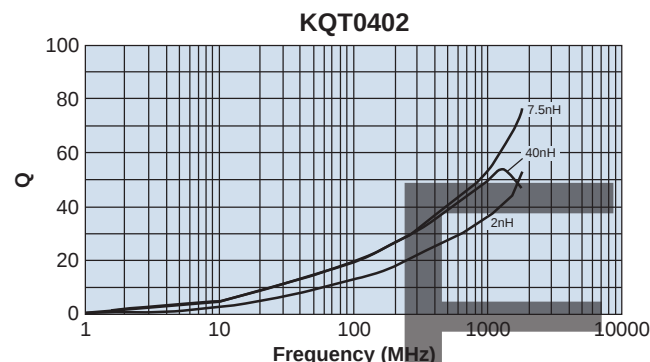
7/25/24

environmental applications (continued)

L-Frequency Characteristics



Q-Frequency Characteristics



Test equipment: HP4291A impedance analyzer

Performance Characteristics

Parameter	Requirements Maximum Limit	Δ L/L Δ Q/Q Typical	Test Method
Resistance to Soldering Heat	No significant abnormality in appearance Δ L/L: ±5%, Δ Q/Q: ±10%	Δ L/L: ±2.7% Δ Q/Q: ±6.6%	260°C ± 5°C, 10s ± 1s
Rapid Change of Temperature	No significant abnormality in appearance Δ L/L: ±5%, Δ Q/Q: ±10%	Δ L/L: ±2.1% Δ Q/Q: ±5.3%	-40°C (30min.)/ +125°C (30min.) 100 cycles
Low Temperature Exposure	No significant abnormality in appearance Δ L/L: ±5%, Δ Q/Q: ±10%	Δ L/L: ±1.8% Δ Q/Q: ±2.8%	-40°C ± 2°C, 1000h
High Temperature Exposure	No significant abnormality in appearance Δ L/L: ±5%, Δ Q/Q: ±10%	Δ L/L: ±1.8% Δ Q/Q: ±5.3%	125°C ± 2°C, 1000h
Moisture Exposure	No significant abnormality in appearance Δ L/L: ±5%, Δ Q/Q: ±10%	Δ L/L: ±0.9% Δ Q/Q: ±6.9%	40°C ± 2°C, 90%~95%RH, 1000h
Resistance to Solvent	No damage and marking shall remain legible	—	Accordance with MIL-STD 202F Method 215

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7/25/24