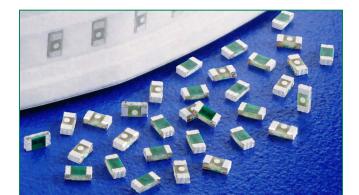


435 Series 0402 Fast-Acting Fuse







Agency Approvals

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE		
71 2	E10480	0.250 - 5.0A		
⊕ .	29862	0.250 - 5.0A		

Electrical Characteristics for Series

% of Ampere Rating	Ampere Rating	OpeningTime at 25°C	
100%	0.250A - 5A	4 hours, Minimum	
200%	0.375A - 5A	5 secs., Maximum	
300%	0.250A	5 secs., Maximum	
300%	0.375A - 5A	0.2 sec., Maximum	

Description

The 435 Series are fast-acting surface mount thin-film fuses. Their ultra-small size (0402 size) makes them ideal for secondary protection of circuits used in space constrained applications such as hand-held portable electronic devices.

This series is 100% lead-free and meet the requirements of the RoHS directive. New Halogen-Free 435 Series fuses are available-to order use the "HF" suffix. See Part Numbering section for additional information.

Features

- 35A interrupt rating at 32VDC
- Small size with current ratings of 0.25 to 5.0 amperes
- RoHS compliant, Lead-Free and Halogen-Free
- Maximum protection of sensitive circuits as fuses are designed to open consistently in <5sec at 200% overload.
- Enhanced Breaking Capacity, High I2t

Applications

Secondary protection for space constrained applications such as:

- Cell phones
- Battery packs
- · Digital cameras
- DVD players
- · Hard disk drives.

Additional Information



Datasheet



Resources



Samples

Electrical Specifications by Item

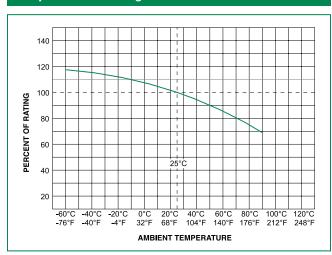
Ampere	Amp	Max Voltage	Interrupting	Nominal Cold	Nominal	Nom	Nom Power	Agency A	pprovals
Rating (A)	Code	Rating (V)	Rating	Resistance (Ohms)	Melting I²t (A²sec)	Voltage Drop (mV)	Dissipation (W)	71	⑤ ₽.
0.250	.250	32		0.3600¹	0.0025	92.49	0.0231	Х	X
0.375	.375	32		0.1930 ¹	0.0035	84.64	0.03174	Х	Х
0.500	.500	32		0.1600¹	0.0053	93.35	0.04668	Х	X
0.750	.750	32		0.1050 ¹	0.0120	101.84	0.07638	Х	Х
1.00	001.	32		0.0730 ¹	0.0200	87.45	0.08745	Х	Х
1.25	1.25	32		0.0600 ¹	0.0350	96.37	0.12046	Х	Х
1.50	01.5	32	35A	0.0470 ¹	0.0560	86.70	0.13005	Х	X
1.75	1.75	32	@32VDC ²	0.0390 ¹	0.0750	81.13	0.14198	Х	Х
2.00	002.	32		0.0300 ¹	0.1000	70.62	0.14120	Х	Х
2.50	02.5	32		0.0200 ¹	0.1560	55.25	0.13813	Х	Х
3.00	003.	32		0.0170 ¹	0.2032	60.58	0.18740	Х	Х
3.50	03.5	32		0.0150 ¹	0.3017	57.84	0.20244	Х	X
4.00	004.	32		0.0105 ¹	0.3084	57.00	0.22800	Х	X
5.00	005.	32		0.0085 ¹	0.5310	52.44	0.26220	Х	Х

^{1.} Measured at 10% of rated current, 25°C.

Measured at rated voltage.



Temperature Re-rating Curve



Note:

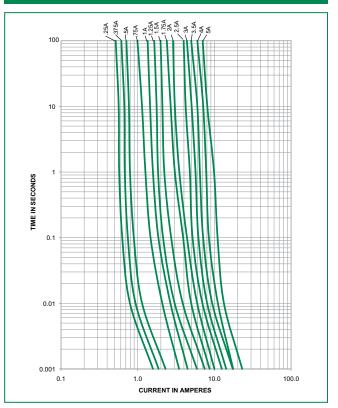
 Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Example:

For continuous operation at 70 degrees celsius, the fuse should be derated as follows: I = $(0.75)(0.80)I_{RAT} = (0.60)I_{RAT}$

The temperature derating curve represents the nominal conditions. For questions about temperature derating curve, please consult Littelfuse technical support for assistance.

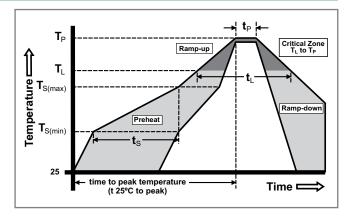
Average Time Current Curves



Soldering Parameters

Reflow Condition		Pb – Free assembly	
	-Temperature Min (T _{s(min)})	150°C	
Pre Heat	-Temperature Max (T _{s(max)})	200°C	
	-Time (Min to Max) (t _s)	60 – 120 secs	
Average r	amp up rate (Liquidus Temp ık	5°C/second max	
T _{S(max)} to T	- Ramp-up Rate	5°C/second max	
Reflow	-Temperature (T _L) (Liquidus)	217°C	
hellow	-Temperature (t _L)	60 – 150 seconds	
PeakTemp	perature (T _P)	250+ ^{0/-5} °C	
Time within 5°C of actual peak Temperature (t _p)		20 - 40 seconds	
Ramp-down Rate		5°C/second max	
Time 25°C to peakTemperature (T _P)		8 minutes Max.	
Do not exceed		260°C	





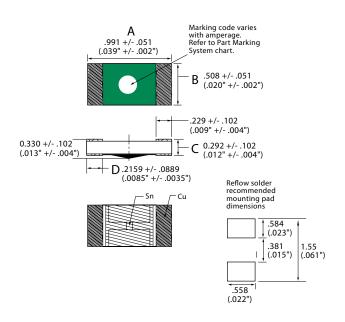


Product Characteristics

Materials	Body: Epoxy / Glass Substrate; Parts with 'HF' suffix: Halogen Free Epoxy / Gla Terminations: 100% Tin over Nickel over Coppe Device Weight: 0.316mg	
Terminal Strength	MIL-STD-202, Method 211, Test Condition A	
Insulation Resistance	After Opening: Greater than 10,000Ohms	

Operating Temperature	–55°C to 90°C. Consult temperature re-rating curve chart. For operation above 90°C please contact Littelfuse.	
Thermal Shock	Withstands 5 cycles of -55°C to 125°C	
Vibration	MIL-STD-202, Method 201	

Dimensions

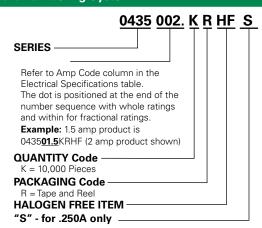


	Α	В	С	D
inch min	0.037	0.018	0.008	0.005
inch max	0.041	0.022	0.016	0.012
mm min	0.94	0.457	0.190	0.127
mm max	1.04	0.559	0.394	0.305

Part Marking System

Amp Code	Marking Code
.250	
.375	
.500	
.750	
001.	
1.25	[:]
01.5	
1.75	
002.	
02.5	[-]
003.	
03.5	
004.	
005.	

Part Numbering System



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
8mm Tape and Reel	EIA-481 Rev. D (IEC 60286, part 3)	10000	KR