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Multifuse PTC
Resettable Overcurrent
Protectors

Multifuse products are made from a conductive plastic formed into thin sheets with electrodes attached to either side. The conductive plastic is manufactured from a non-conductive crystalline polymer and a highly conductive carbon black. The electrodes ensure even distribution of power through the device and provide a surface for leads to be attached. The conductive carbon black filler material is dispersed in the polymer. When the polymer is at room temperature, there are numerous carbon chains forming conductive paths through the material. Under a fault condition, P/R heating causes the plastic material's temperature to rise, resulting in a phase transformation of the polymer matrix to an amorphous structure. This is accompanied with a small expansion. As the conductive particles move apart, most of them no longer conduct current and the resistance of the device increases sharply. The device will remain in this condition until the fault is cleared, allowing the carbon chains to reform as the polymer re-crystallizes. The resistance quickly returns to its original value. While fuses work well only once, replacement is not an option in many applications due to inconvenience, warranty cost or damaged reputations. Applications for resettable devices include computers and PDAs, motors, audio equipment, test and measurement equipment, security and fire alarms, medical, POS equipment, industrial controls, automotive and marine electronics, and battery-operated toys. **Maximum Current:** 40-100 amps. Manufacturer's literature available upon request. Kinked lead option is available for board standoff. Contact Allied for details.

Dimensions — mm

Mfr.'s Type	A		C		D		Mfr.'s Type	A		C		D	
	Max.	Max.	Nom.	Tol.	Min.	Max.		Max.	Max.	Nom.	Tol.	Min.	Max.
MF-R010	7.4	12.7	5.1	0.7	7.6	3.1	MF-R185	12.0	18.4	5.1	0.7	7.6	3.0
MF-R020	7.4	12.7	5.1	0.7	7.6	3.1	MF-R250	12.0	18.3	5.1	0.7	7.6	3.0
MF-R025	7.4	12.7	5.1	0.7	7.6	3.1	MF-R250-0-10	11.4	18.3	5.1	0.7	7.6	3.0
MF-R030	7.4	13.4	5.1	0.7	7.6	3.1	MF-R300	12.0	18.3	5.1	0.7	7.6	3.0
MF-R040	7.4	13.7	5.1	0.7	7.6	3.1	MF-R400	14.4	24.8	5.1	0.7	7.6	3.0
MF-R050	7.9	13.7	5.1	0.7	7.6	3.1	MF-R500	17.4	24.9	10.2	0.7	7.6	3.0
MF-R065	9.7	15.2	5.1	0.7	7.6	3.1	MF-R600	19.3	31.9	10.2	0.7	7.6	3.0
MF-R075	10.4	16.0	5.1	0.7	7.6	3.1	MF-R700	22.1	29.8	10.2	0.7	7.6	3.0
MF-R090	11.7	16.7	5.1	0.7	7.6	3.1	MF-R800	24.2	32.9	10.2	0.7	7.6	3.0
MF-R090-0-9	7.4	12.2	5.1	0.7	7.6	3.0	MF-R900	24.2	32.9	10.2	0.7	7.6	3.0
MF-R110	8.9	14.0	5.1	0.7	7.6	3.0	MF-RX110	13.0	18.0	5.1	0.7	7.6	3.1
MF-R135	8.9	18.9	5.1	0.7	7.6	3.0	MF-RX160	16.3	21.3	5.1	0.7	7.6	3.1
MF-R160	10.2	16.8	5.1	0.7	7.6	3.0	—	—	—	—	—	—	—

Stock No.	Mfr.'s Type	Style	Initial Resistance @ 23°C		Current Limit @ 23°C		Max. Volts	Lead Dia.	EACH				
			Min.	Max.	Hold	Trip			1-9	10-24	25-49	50-99	100-249
754-1350	MF-R010	1	2.500	4.500	0.10	0.20	60	0.51	.40	.35	.32	.30	.28
754-1351	MF-R017	1	2.000	2.200	0.17	0.34	60	0.51	.69	.62	.57	.55	.49
754-1352	MF-R020	1	1.500	2.840	0.40	0.40	60	0.51	.43	.37	.34	.31	.29
754-1354	MF-R025	1	1.000	1.950	0.25	0.50	60	0.51	.36	.32	.29	.27	.25
754-1356	MF-R030	1	0.760	1.360	0.30	0.60	60	0.51	.60	.32	.29	.27	.25
754-1358	MF-R040	1	0.520	0.860	0.40	0.80	60	0.51	.38	.33	.31	.28	.26
754-1360	MF-R050	1	0.410	0.770	0.50	1.00	60	0.51	.48	.42	.39	.36	.33
754-1362	MF-R065	1	0.270	0.480	0.65	1.30	60	0.51	.47	.41	.37	.35	.32
754-1364	MF-R075	1	0.180	0.400	0.75	1.50	60	0.51	.51	.44	.40	.37	.35
754-1366	MF-R090	1	0.140	0.310	0.90	1.80	60	0.51	.47	.41	.37	.35	.32
754-1367	MF-R090-0-9	2	0.070	0.120	0.90	1.80	30	0.51	.47	.41	.37	.35	.32
754-1368	MF-R110	1	0.100	0.180	1.10	2.20	30	0.51	.45	.41	.37	.35	.32
754-1370	MF-R135	1	0.065	0.115	1.35	2.70	30	0.51	.80	.70	.65	.59	.55
754-1372	MF-R160	1	0.055	0.105	1.60	3.20	30	0.51	.49	.43	.39	.36	.34
754-1374	MF-R185	1	0.040	0.070	1.85	3.70	30	0.51	.49	.43	.39	.36	.34
754-1376	MF-R250	2	0.025	0.048	2.50	5.00	30	0.81	.47	.41	.37	.35	.32
754-1377	MF-R250-0-10	3	0.025	0.048	2.50	5.00	30	0.51	.55	.48	.44	.41	.38
754-1378	MF-R300	2	0.020	0.050	3.00	6.00	30	0.81	.96	.84	.78	.71	.64
754-1380	MF-R400	2	0.010	0.030	4.00	8.00	30	0.81	1.01	.89	.83	.77	.67
754-1382	MF-R500	2	0.010	0.030	5.00	10.00	30	0.81	1.09	.94	.88	.81	.71
754-1384	MF-R600	2	0.005	0.020	6.00	12.00	30	0.81	1.12	.97	.90	.84	.74
754-1386	MF-R700	2	0.005	0.020	7.00	14.00	30	0.81	1.15	.99	.93	.86	.76
754-1388	MF-R800	2	0.005	0.020	8.00	16.00	30	0.81	1.18	1.03	.94	.88	.78
754-1389	MF-R900	2	0.005	0.010	9.00	18.00	30	0.81	1.24	1.11	1.00	.94	.82
754-1395	MF-RX110	3	0.150	0.250	1.10	2.20	60	0.81	.47	.41	.37	.35	.32
754-1397	MF-RX160	3	0.090	0.140	1.60	3.20	60	0.81	.55	.48	.44	.41	.38

PTC Resettable Fuses

Terminal Material: Solder-plated copper. Termination Pad Solderability: Meets EIA specification RS-186-9E, ANSI/J-STD-002 Category 3.

Dimensions — mm

Mfr.'s Type	A		B		C		D		E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
MF-MSMD020-2	4.37	4.73	3.07	3.41	0.56	0.81	0.30	0.25	0.50	0.50
MF-USMD035-2	3.00	3.43	3.35	2.80	0.38	0.62	0.35	0.25	0.50	0.50
MF-MSMD050-2	4.37	4.73	3.07	3.41	0.38	0.62	0.30	0.25	0.50	0.50
MF-MSMD075-2	4.37	4.73	3.07	3.41	0.38	0.62	0.30	0.25	0.50	0.50
MF-MSMD110-2	4.37	4.73	3.07	3.41	0.38	0.62	0.30	0.25	0.50	0.50

Stock No.	Mfr.'s Type	Initial Resistance		Current Limit @ 23°C		Max Volts	EACH				
		Min.	Max.	Hold	Trip		1-9	10-24	25-49	50-99	100-249
754-1315	MF-MSMD020-2	0.40	5.00	0.20	0.40	30.0	.49	.43	.39	.36	.34
754-1316	MF-USMD035-2	0.32	1.30	0.35	0.70	6.0	.49	.43	.39	.36	.34
754-1317	MF-MSMD050-2	0.15	1.00	0.50	1.00	15.0	.71	.46	.42	.39	.36
754-1318	MF-MSMD075-2	0.11	0.45	0.75	1.50	13.2	.53	.46	.42	.39	.36
754-1319	MF-MSMD110-2	0.04	0.21	1.10	2.20	6.0	.53	.45	.42	.39	.36

