



POLYTRON RESESTABLE FUSES
POLYTRON FUSIBILI RIPRISTINABILI

INFO

APPLICATIONS
APPLICAZIONI

LEGEND
DIDASCALIA

PTC

ENG

A resettable fuse is a polymeric positive temperature coefficient (PTC) device that is a passive electronic component used to protect against overcurrent faults in electronic circuits.

Un fusibile ripristinabile è un dispositivo polimerico, passivo, a coefficiente di temperatura positivo (*Polymeric Positive Temperature Coefficient*). Il PTC è utilizzato per limitare il flusso di corrente, per rilevare un incremento di temperatura nei dispositivi attivi di potenza e per limitare i transistori di corrente. Appartiene alla famiglia dei termistori

CONSTRUCTION
COSTRUZIONE

A polymeric PTC device is made up of a non-conductive crystalline organic polymer matrix that is loaded with carbon black particles to make it conductive.

Un dispositivo polimerico PTC è costituito da una matrice polimerica organica cristallina non conduttiva che viene caricata con particelle di nero di carbonio per renderla conduttiva.

OPERATION
FUNZIONAMENTO

When too much current flows through the device it begins to heat. As the device heats, the polymer will expand, changing from a crystalline into an amorphous state. The expansion separates the carbon particles and breaks the conductive pathways, causing the device to heat faster and expand more, further raising the resistance. This increase in resistance substantially reduces the current in the circuit.

Quando il flusso di corrente cresce, il dispositivo inizia a riscaldarsi, il polimero si espande, passando da uno stato cristallino a uno stato amorfo. L'espansione separa le particelle di carbonio e rompe i percorsi conduttivi, facendo sì che il dispositivo si riscaldi più velocemente e continui l'espansione, aumentando ulteriormente la resistenza. L'aumento della resistenza riduce sostanzialmente la corrente nel circuito e il PTC si (auto) ripristina.

CURRENT
CHARACTERISTICS
CARATTERISTICHE
DI CORRENTE

Trip Current and Hold Current of this fuses are rated at 23°. Its Trip Current is twice as much as its Hold Current.

These particular fuses does not trip at or below rated Hold Current, or blow and will trip at or above its Trip Current value. The current are reduced nearly 50% at 85°C and increased to 150% at -40°C.

La corrente di intervento (It) e la corrente di tenuta (Ih) sono tarate a 23°C. La corrente di intervento è il doppio della corrente di tenuta. Questi particolari fusibili non intervengono a valori pari o inferiori alla propria corrente di tenuta ma a valori pari o superiori alla propria corrente di intervento. I valori in gioco diminuiscono di circa il 50% a 85°C ed aumentano del 150% a -40°C.

BATTERY CHARGERS / CARICABATTERIE

AUTOMOTIVE

POS TERMINAL / TERMINALI POS

TRASFORMERS / TRASFORMATORI

ELECTRONIC EQUIPMENT / APPARECCHIATURE ELETTRICHE

RECHARGEABLE BATTERIES / BATTERIE RICARICABILI

PORTABLE COMPUTER / COMPUTER PORTATILI

POWER SUPPLY / ALIMENTAZIONE ELETTRICA

OPTICAL SENSOR / SENSORI OTTICI

INPUT - OUTPUT PORT PROTECTION

I_H **Hold Current: maximum current at which the device will not a trip at 23°C still air**
Corrente di tenuta: è la massima corrente in cui il fusibile non interviene a 23°C

I_T **Trip current: maximum current at which the device will always trip at 23°C still air**
Corrente di intervento: è la minima corrente alla quale il fusibile alla temperatura di 23°C interviene

Max T. T. **Max time to trip at 5 x I_H, second**
Velocità d'intervento: parametro strettamente legato alla corrente di guasto. È il tempo massimo d'intervento a 5 x I_H secondi

I_{MAX} **Maximum fault current device can withstand without damage at rated voltage (V max)**
Corrente massima che il dispositivo sopporta senza guastarsi alla tensione nominale

V_{MAX} **Maximum voltage device can withstand without damage at its rated current**
È la tensione max. alla quale il fusibile può lavorare, alla corrente nominale senza guasti I_H

P_d W **Typical power dissipated form device when in the tripped state in 23°C stillair environment**
Potenza dissipata dal componente alle condizioni nominali a 23°C

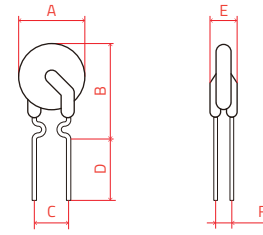
R_{MIN} **Minimum device resistance at 23°C**
Resistenza minima del componente a 23°C

R_{MAX} **Maximum device resistance at 23°C, 1 hour after tripping**
Resistenza massima del componente a 23°C, 1 ora dopo l'intervento

FRX Series



LEAD SIZE
24 AWG
Ø 0.51 mm diameter



0,50 mA ~ 3,75 A **FABRIQUE NORM.** dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Insulating coating Flame retardant epoxy **UL 94 V-0**
Rivestimento isolante Epossidico ignifugo

Soldering MIL-STD-202 met. 208E **Operating temp.** -40° C / +85° C
Saldatura Temp. operativa

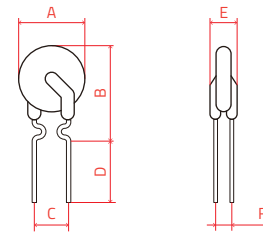
Voltage 60 V **Terminals** Cu, Sn plated / staginato
Tensione Terminali

THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	158%	138%	119%	100%	90%	81%	70%	60%	50%	36%

CODE	IH	It	Max T.T.	IMAX	VMAX	Pd W	RMIN Ω	RMAX Ω
FRX005-60F	0.05 A	0.10 A	5.0s	40 A	60 Vdc	0.26 W	7.30	20.00
FRX010-60F	0.10 A	0.20 A	4.0s	40 A	60 Vdc	0.38 W	2.50	7.50
FRX017-60F	0.17 A	0.34 A	3.0s	40 A	60 Vdc	0.48 W	2.00	8.00
FRX020-60F	0.20 A	0.40 A	2.2s	40 A	60 Vdc	0.41 W	1.83	4.40
FRX025-60F	0.25 A	0.50 A	2.5s	40 A	60 Vdc	0.45 W	1.25	3.00
FRX030-60F	0.30 A	0.60 A	3.0s	40 A	60 Vdc	0.49 W	0.88	2.10
FRX040-60F	0.40 A	0.80 A	3.8s	40 A	60 Vdc	0.56 W	0.55	1.29
FRX050-60F	0.50 A	1.00 A	4.0s	40 A	60 Vdc	0.77 W	0.50	1.17
FRX065-60F	0.65 A	1.30 A	5.3s	40 A	60 Vdc	0.88 W	0.31	0.72
FRX075-60F	0.75 A	1.50 A	6.3s	40 A	60 Vdc	0.92 W	0.25	0.60
FRX090-60F	0.90 A	1.80 A	7.2s	40 A	60 Vdc	0.99 W	0.20	0.47
FRX110-60F	1.10 A	2.20 A	8.2s	40 A	60 Vdc	1.50 W	0.15	0.38
FRX135-60F	1.35 A	2.27 A	9.6s	40 A	60 Vdc	1.70 W	0.12	0.30
FRX160-60F	1.60 A	3.20 A	11.4s	40 A	60 Vdc	1.90 W	0.09	0.22
FRX185-60F	1.85 A	3.70 A	12.6s	40 A	60 Vdc	2.10 W	0.08	0.19
FRX250-60F	2.50 A	5.00 A	15.6s	40 A	60 Vdc	2.50 W	0.05	0.13
FRX300-60F	3.00 A	6.00 A	19.8s	40 A	60 Vdc	2.80 W	0.04	0.10
FRX375-60F	3.75 A	7.50 A	24.0s	40 A	60 Vdc	3.20 W	0.03	0.08

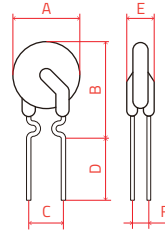
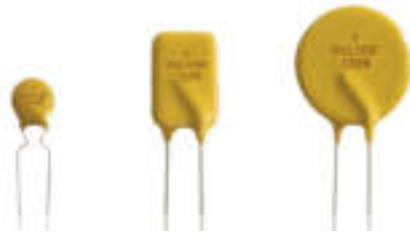
LEAD SIZE
20 AWG
Ø 0.81 mm diameter



CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRX005-60F	7.4	12.7	5.1	7.6	3.1	1.1
FRX010-60F						
FRX017-60F						
FRX020-60F						
FRX025-60F						
FRX030-60F	13.0					
FRX040-60F	7.6	13.5				
FRX050-60F	7.9	13.7				
FRX065-60F	9.7	14.5				
FRX075-60F	10.4	15.2				
FRX090-60F	11.7	15.8				

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRX110-60F	13.0	18.0	5.1	7.6	3.1	1.4
FRX135-60F	14.5	19.6				
FRX160-60F	16.3	21.3				
FRX185-60F	17.8	22.9				
FRX250-60F	21.3	26.4				
FRX300-60F	24.9	30.0	10.2			
FRX375-60F	28.5	33.5				

FRX90V Series



LEAD SIZE
24 AWG
Ø 0.51 mm diameter



10 mA ~ 3,75 A FABRIQUE NORM. dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Insulating coating Rivestimento isolante
Flame retardant epoxy Epossidico ignifugo **UL 94 V-0**

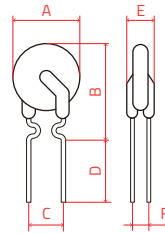
Soldering Saldatura MIL-STD-202 met. 208E
Operating temp. Temp. operativa -40° C / +85° C

Voltage Tensione 90 V
Terminals Terminali Cu, Sn plated stagnato

THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	158%	138%	119%	100%	90%	81%	70%	60%	50%	38%

CODE	IH	It	Max T. T.	IMAX	Pd	RMIN Ω	RMAX Ω
FRX010-90F	100 mA	0.20 A	4.00 s	40 A	0.38 W	2.50	7.50
FRX015-90F	150 mA	0.35 A	10.0 s	40 A	0.70 W	2.40	7.00
FRX017-90F	170 mA	0.34 A	3.0 s	40 A	0.48 W	2.00	8.00
FRX020-90F	200 mA	0.40 A	2.20 s	40 A	0.41 W	1.83	4.40
FRX025-90F	250 mA	0.50 A	2.50 s	40 A	0.45 W	1.25	3.00
FRX030-90F	300 mA	0.60 A	300 s	40 A	0.49 W	0.88	2.10
FRX035-90F	350 mA	0.75 A	10.0 s	40 A	1.30 W	0.70	2.50
FRX040-90F	400 mA	0.80 A	3.80 s	40 A	0.56 W	0.55	1.29
FRX050-90F	500 mA	1.00 A	4.00 s	40 A	0.77 W	0.50	1.17
FRX055-90F	550 mA	1.20 A	10.0 s	40 A	1.50 W	0.40	1.50
FRX065-90F	650 mA	1.30 A	5.30 s	40 A	0.88 W	0.31	0.72
FRX075-90F	750 mA	1.50 A	6.30 s	40 A	0.92 W	0.25	0.60
FRX090-90F	900 mA	1.80 A	7.20 s	40 A	0.99 W	0.20	0.47
FRX110-90F	1.10 A	2.20 A	8.20 s	40 A	1.50 W	0.15	0.38
FRX135-90F	1.35 A	2.70 A	9.60 s	40 A	1.70 W	0.12	0.30
FRX160-90F	1.60 A	3.20 A	11.4 s	40 A	1.90 W	0.09	0.22
FRX185-90F	1.85 A	3.70 A	12.4 s	40 A	2.10 W	0.08	0.19
FRX250-90F	2.50 A	5.00 A	15.6 s	40 A	2.50 W	0.05	0.13
FRX300-90F	3.00 A	6.00 A	19.8 s	40 A	2.80 W	0.04	0.10
FRX375-90F	3.75 A	7.50 A	24.0 s	40 A	3.20 W	0.03	0.08

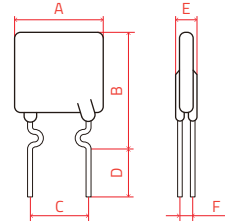


LEAD SIZE
20 AWG
Ø 0.81 mm diameter

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRX010-90F	7.4	12.7	5.1	7.6	3.1	1.1
FRX015-90F						
FRX017-90F						
FRX020-90F						
FRX025-90F						
FRX030-90F		13.0				
FRX035-90F		12.7				
FRX040-90F	7.6	13.5				
FRX050-90F	7.9	13.7				
FRX055-90F	9.7	14.0				
FRX065-90F	9.7	14.5				
FRX075-90F	10.4	15.2				
FRX090-90F	11.7	15.8				

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRX110-90F	13.0	18.0	5.1	7.6	3.8	1.4
FRX135-90F	14.5	19.6				
FRX160-90F	16.3	21.3				
FRX185-90F	17.8	22.9	10.2	7.6	3.8	1.4
FRX250-90F	21.3	26.4				
FRX300-90F	24.9	30.0				
FRX375-90F	28.5	33.5				

FRU Series



LEAD SIZE
24 AWG
Ø 0.51 mm diameter



0,90 A ~ 9 A **FABRIQUE NORM.** **dc**

On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: scolti [conf. standard] - nastrati [conf. industriale]

Insulating coating Flame retardant epoxy **UL 94 V-0**
Rivestimento isolante Epossidico ignifugo

Soldering MIL-STD-202 met. 208E **Operating temp.** -40° C / +85° C
Saldatura Temp. operativa

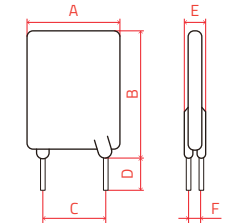
Voltage 30V **Terminals** Cu, Sn plated / stagnato
Tensione Terminali

THERMAL DERATING										
TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	145%	130%	115%	100%	92%	84%	76%	70%		50%

CODE	IH	It	Max T.T.	IMAX	VMAX	Pd W	RMIN Ohms	RMAX Ohms
FRU090-30F	0.90 A	1.80A	5.9s	100 A	30 Vdc	0.6 W	0.070	0.220
FRU110-30F	1.10 A	2.20A	6.6s	100 A	30 Vdc	0.7 W	0.050	0.170
FRU135-30F	1.35 A	2.70A	7.3s	100 A	30 Vdc	0.8 W	0.040	0.130
FRU160-30F	1.60 A	3.20A	8.0s	100 A	30 Vdc	0.9 W	0.030	0.110
FRU185-30F	1.85 A	3.70A	8.7s	100 A	30 Vdc	1.0 W	0.030	0.090
FRU250-30F	2.50 A	5.00A	10.3s	100 A	30 Vdc	1.2 W	0.020	0.070
FRU300-30F	3.00 A	6.00A	10.8s	100 A	30 Vdc	2.0 W	0.020	0.080
FRU400-30F	4.00 A	8.00A	12.7s	100 A	30 Vdc	2.5 W	0.010	0.050
FRU500-30F	5.00 A	10.00A	14.5s	100 A	30 Vdc	3.0 W	0.010	0.050
FRU600-30F	6.00 A	12.00A	16.0s	100 A	30 Vdc	3.5 W	0.005	0.040
FRU700-30F	7.00 A	14.00A	17.5s	100 A	30 Vdc	3.8 W	0.005	0.030
FRU800-30F	8.00 A	16.00A	18.8s	100 A	30 Vdc	4.0 W	0.005	0.020
FRU900-30F	9.00 A	18.00A	20.0s	100 A	30 Vdc	4.2 W	0.005	0.020

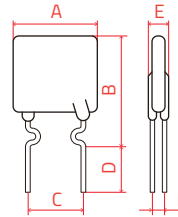
CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRU090-30F	7.4	12.7	5.1	7.6	3.0	0.9
FRU110-30F		14.2				
FRU135-30F	13.5					
FRU160-30F	15.2					
FRU185-30F	10.2	15.7				
FRU250-30F	11.4	18.3				

LEAD SIZE
20 AWG
Ø 0.81 mm diameter



CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRU300-30F	11.4	17.3	5.1	7.6	3.0	1.2
FRU400-30F	14.0	20.1				
FRU500-30F	14.0	24.9				
FRU600-30F	16.5	24.9				
FRU700-30F	19.1	26.7				
FRU800-30F	21.6	29.2	10.2			
FRU900-30F	24.1	29.7				

FRT Series



LEAD SIZE
24 AWG
Ø 0.51 mm diameter



500 mA - 2,5 A

FABRIQUE NORM.

dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Insulating coating
Rivestimento isolante

Flame retardant epoxy Epossidico ignifugo **UL 94 V-0**

Soldering
Saldatura MIL-STD-202 met. 208E

Operating temp.
Temp. operativa -40° C / +85° C

Voltage
Tensione 36 V

Terminals
Terminali Cu, Sn plated stagnato

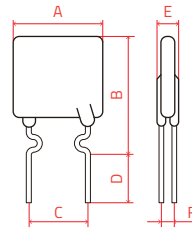
CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRT050-33F	7.4	12.7	5.1	7.6	3.0	1.1
FRT075-33F						
FRT090-33F						
FRT120-33F						
FRT135-33F	14.2					
FRT160-33F	14.0					
FRT190-33F	9.0	13.5				
FRT220-33F	10.0	17.0				
FRT250-33F	10.0	19.5				

THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
I _H & I _T %	148%	134%	120%	100%	98%	90%	84%	78%	70%	59%

CODE	I _H	I _T	Max T. T.	I _{MAX}	P _d	R _{MIN} Ω	R _{MAX} Ω
FRT050-33F	500 mA	1 A	5.0 s	40 A	0.67 W	0.140	0.448
FRT075-33F	750 mA	1.50 A	4.0 s	40 A	0.71 W	0.115	0.368
FRT090-33F	900 mA	1.80 A	3.5 s	40 A	0.74 W	0.090	0.288
FRT120-33F	1.20 A	2.30 A	3.5 s	40 A	0.78 W	0.074	0.180
FRT135-33F	1.35 A	2.50 A	4.5 s	40 A	0.84 W	0.059	0.143
FRT160-33F	1.60 A	2.75 A	4.5 s	40 A	0.86 W	0.041	0.131
FRT190-33F	1.90 A	3 A	3.5 s	40 A	0.90 W	0.045	0.092
FRT220-33F	2.20 A	3.50 A	6.5 s	40 A	0.95 W	0.025	0.080
FRT250-33F	2.50 A	4 A	8.0 s	40 A	0.99 W	0.020	0.064

FRG Series



LEAD SIZE
24 AWG
Ø 0.51 mm diameter



2,5 A ~ 14 A FABRIQUE NORM. dc

On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Insulating coating Rivestimento isolante Flame retardant epoxy Epossidico ignifugo **UL 94 V-0**

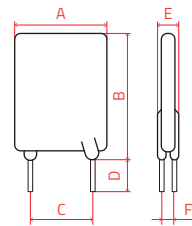
Soldering Saldatura MIL-STD-202 met. 208E **Operating temp.** Temp. operativa -40° C / +85° C

Voltage Tensione 16V **Terminals** Terminali Cu, Sn plated stagnato

THERMAL DERATING										
TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	125°C
IH & It %	148%	132%	116%	100%	91%	84%	76%	69%	60%	48%

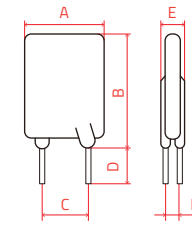
CODE	IH	It	Max T. T.	IMAX	Pd	RMIN Ω	RMAX Ω
FRG250-16F	2,5 A	4,7 A	5,0s	100 A	1,0 W	0,022	0,053
FRG300-16F	3,0 A	5,1 A	2,0s	100 A	2,3 W	0,034	0,105
FRG400-16F	4,0 A	6,8 A	3,5s	100 A	2,4 W	0,020	0,063
FRG500-16F	5,0 A	8,5 A	3,6s	100 A	2,6 W	0,014	0,044
FRG600-16F	6,0 A	10,2 A	5,8s	100 A	2,8 W	0,009	0,033
FRG700-16F	7,0 A	11,9 A	8,0s	100 A	3,0 W	0,006	0,021
FRG800-16F	8,0 A	13,6 A	9,0s	100 A	3,0 W	0,005	0,018
FRG900-16F	9,0 A	15,3 A	12,0s	100 A	3,3 W	0,004	0,015
FRG1000-16F	10,0 A	17,0 A	12,5s	100 A	3,3 W	0,003	0,012
FRG1100-16F	11,0 A	18,7 A	13,5s	100 A	3,7 W	0,003	0,010
FRG1200-16F	12,0 A	20,4 A	16,0s	100 A	4,2 W	0,002	0,009
FRG1400-16F	14,0 A	23,8 A	20,0s	100 A	4,6 W	0,002	0,008

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRG250-16F	8.9	12.8	5.1	7.6	3.0	1.2



LEAD SIZE
20 AWG
Ø 0.81 mm diameter

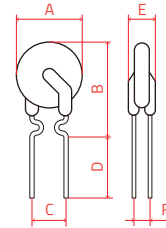
CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRG300-16F	7.1	11.0	5.1	7.6	3.0	1.2
FRG400-16F	8.9	12.8				
FRG500-16F	10.4	14.3				
FRG600-16F	10.7	17.1				
FRG700-16F	11.2	19.7				
FRG800-16F	12.7	20.9				
FRG900-16F	14.0	21.7				
FRG1000-16F	16.5	24.1				
FRG1100-16F	17.5	26.0				



LEAD SIZE
18 AWG
Ø 1.0 mm diameter

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRG1200-16F	17.5	28.0	10.2	7.6	3.6	1.4
FRG1400-16F	27.9	27.9				

FHT Series



LEAD SIZE
24 AWG
Ø 0.51 mm diameter



500 mA ~ 15 A FABRIQUE NORM. dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Insulating coating Rivestimento isolante Flame retardant epoxy Epossidico ignifugo **UL 94 V-0**

Soldering Saldatura MIL-STD-202 met. 208E **Operating temp.** Temp. operativa -40° C / +85° C

Voltage Tensione 16 V / 30 V **Terminals** Terminali Cu, Sn plated stagnato

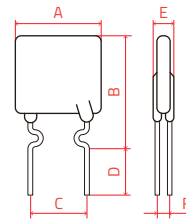
THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	125°C
IH & Ir %	143%	130%	115%	100%	92%	88%	80%	72%	65%	28%

CODE	IH	Voltage	Ir	Max.T.T.	IMAX	Pd	RMIN Ω	RMAX Ω
FHT050-30F	500 mA	30 V	0.9 A	2.5 s	40 A	0.9 W	0.4800	1.1000
FHT070-30F	700 mA	30 V	1.4 A	3.2 s	40 A	1.4 W	0.3000	0.8000
FHT100-30F	1.0 A	30 V	1.9 A	5.2 s	40 A	1.4 W	0.1800	0.4300
FHT200-16F	2.0 A	16 V	3.8 A	3.0 s	100 A	1.4 W	0.0450	0.1100
FHT300-16F	3.0 A	16 V	6.0 A	5.0 s	100 A	3.0 W	0.0330	0.0790
FHT400-16F	4.0 A	16 V	7.0 A	5.0 s	100 A	3.3 W	0.0240	0.0600
FHT450-16F	4.5 A	16 V	7.8 A	3.0 s	100 A	3.6 W	0.0220	0.0540
FHT550-16F	5.5 A	16 V	10.0 A	6.0 s	100 A	3.5 W	0.0150	0.0370
FHT600-16F	6 A	16 V	10.8 A	5.0 s	100 A	4.1 W	0.0130	0.0320
FHT650-16F	6.5 A	16 V	12.0 A	5.5 s	100 A	4.3 W	0.0110	0.0260
FHT700-16F	7 A	16 V	13.0 A	7.0 s	100 A	4.0 W	0.0100	0.0250
FHT750-16F	7.5 A	16 V	13.1 A	7.0 s	100 A	4.5 W	0.0094	0.0220
FHT800-16F	8 A	16 V	15.0 A	8.0 s	100 A	4.2 W	0.0080	0.0200
FHT900-16F	9 A	16 V	16.5 A	10.0 s	100 A	5.0 W	0.0074	0.0170
FHT1000-16F	10 A	16 V	18.5 A	9.0 s	100 A	5.3 W	0.0062	0.0150
FHT1100-30F	11 A	16 V	20.0 A	11.0 s	100 A	5.5 W	0.0055	0.0130
FHT1300-30F	13 A	16 V	24.0 A	13.0 s	100 A	6.9 W	0.0041	0.0100
FHT1400-16F	14 A	16 V	27.0 A	13.0 s	100 A	6.9 W	0.0030	0.0090
FHT1500-16F	15 A	16 V	28.0 A	20.0 s	100 A	7.0 W	0.0032	0.0092

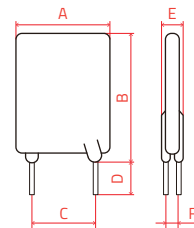
CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FHT050-30F	7.4	12.7	5.1	7.6	3.3	1.2
FHT100-30F	9.7	13.6			3.0	
FHT200-16F	9.4	14.4				

LEAD SIZE
24 AWG
Ø 0.51 mm diameter



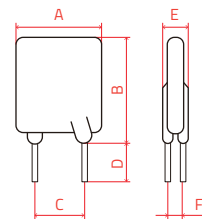
CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FHT070-30F	6.9	10.8	5.1	7.6	3.0	1.2

LEAD SIZE
20 AWG
Ø 0.81 mm diameter



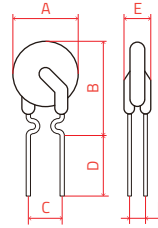
CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FHT300-16F	8.8	13.8	5.1	7.6	3.0	1.2
FHT400-16F	10.0	15.0				
FHT450-16F	10.4	15.6				
FHE550-16F	11.2	18.9				
FHT600-16F	11.2	21.0				
FHT650-16F	12.7	22.2				
FHE700-16F	14.0	21.9				
FHT750-16F	14.0	23.5				
FHT800-16F	16.5	22.5				
FHE900-16F	16.5	25.7				
FHT1000-16F	17.5	26.5				
FHT1100-16F	21.0	26.1	10.2			

LEAD SIZE
18 AWG
Ø 1.0 mm diameter



CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FHT1300-16F	23.5	28.7	10.2	7.6	3.6	1.4
FHT1400-16F						

FHE Series



LEAD SIZE
24 AWG
Ø 0.51 mm diameter



500 mA ~ 10 A

FABRIQUE NORM.

dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Insulating coating

Rivestimento isolante

Flame retardant epoxy

Epossidico ignifugo

UL 94 V-0

Soldering

Saldataura

MIL-STD-202 met. 208E

Operating temp.

Temp. operativa

-40° C / +125° C

Voltage

Tensione

32 V

Terminals

Terminali

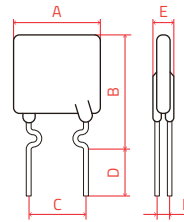
Cu, Sn plated
stagionato

THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	125°C
Ih & It %	143%	130%	115%	100%	92%	88%	80%	72%	65%	28%

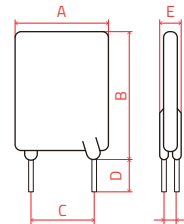
CODE	Ih	It	Max T. T.	Imax	Pd	RMIN Ω	RMAX Ω
FHE050-32F	500 mA	1.0A	3.0s	100 A	0.9 W	0.3500	1.1000
FHE070-32F	700 mA	1.4A	3.2s	100 A	1.4 W	0.2300	0.8000
FHE100-32F	1.0 A	1.9A	6.2s	100 A	1.4 W	0.1500	0.4300
FHE200-32F	2.0 A	4.0A	5.5s	100 A	2.2 W	0.0650	0.2500
FHE300-32F	3.0 A	6.0A	5.0s	100 A	3.2 W	0.0350	0.1100
FHE500-32F	5.0 A	10.0A	9.0s	100 A	5.3 W	0.0150	0.0400
FHE750-32F	7.5 A	15.0A	13.0s	100 A	6.5 W	0.0074	0.0230
FHE1000-32F	10.0 A	20.0A	15.0s	100 A	7.0 W	0.0060	0.0160

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX
FHE050-32F	7.4	12.7	5.1	7.6	3.3
FHE100-32F	9.7	13.6	5.1	7.6	3.0



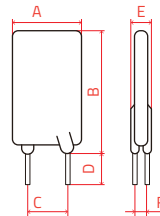
LEAD SIZE
24 AWG
Ø 0.51 mm diameter

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX
FHE070-32F	6.9	10.8	5.1	7.6	3.0



LEAD SIZE
20 AWG
Ø 0.81 mm diameter

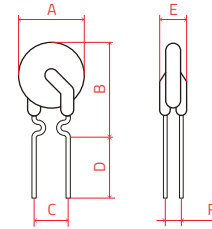
CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX
FHE200-32F	9.5	13.5	5.1	7.6	3.0
FHE300-32F	10.2	15.5	5.1	7.6	3.8
FHE500-32F	14.0	24.1	10.2	7.6	3.8
FHE750-32F	21.1	24.9	10.2	7.6	3.8



LEAD SIZE
18 AWG
Ø 1.0 mm diameter

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX
FHE1000-32F	23.5	27.9	10.2	7.6	4.0

FRHV Series



LEAD SIZE
22 AWG
Ø 0.65 mm diameter



80 mA ~ 40 A **FABRIQUE NORM.** **dc**

On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Insulating coating Flame retardant epoxy **UL 94 V-0**
Rivestimento isolante Epossidico ignifugo

Soldering MIL-STD-202 met. 208E **Operating temp.** -40° C / +85° C
Saldatura Temp. operativa

Voltage 60 V / 250 V **Terminals** Cu, Sn plated / stagnato
Tensione Terminali

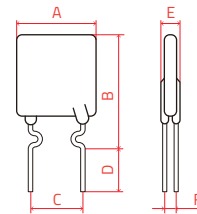
THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
Ih & Ir %	158%	138%	119%	100%	92%	83%	73%	64%	54%	40%

CODE	Ih	Voltage	Ir	Max. TIME to TRIP			RESISTANCE		
				CURRENT	TIME	IMAX	Pd	RMIN Ω	RMAX Ω
FRH080-250VF	80 mA	100 V	0.16 A	0.35 A	4s	3 A	1.0 W	14.0	33.00
FRH110-250VF	110 mA	100 V	0.22 A	1 A	2s	3 A	1.0 W	5.00	16.00
FRH120-250VF	120 mA	100 V	1.9 A	1 A	2s	3 A	1.0 W	4.00	16.00
FRH145-250VF	150 mA	100 V	3.8 A	1 A	25s	3 A	1.0 W	3.00	12.00
FRH180-250XF	180 mA	100 V	0.65 A	3 A	2s	10 A	1.0 W	0.80	4.00
FRH150-600MF	150 mA	250 V	0.30 A	1 A	4s	3 A	1.0 W	6.00	17.00
FRH160-600MF	160 mA	250 V	0.32 A	1 A	7s	3 A	1.0 W	4.00	16.00
FRH160-600MF	160 mA	250 V	0.32 A	1 A	7s	3 A	1.0 W	4.00	18.00
FRH200-600MF	200 mA	250 V	0.40 A	1 A	12s	3 A	1.0 W	4.00	13.50
FRH250-600MF	250 mA	250 V	0.86 A	3 A	1s	3 A	1.0 W	1.00	7.00
FRH400-600F	400 mA	60 V	1 A	3 A	4s	3 A	1.0 W	0.95	1.90

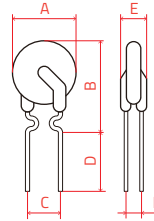
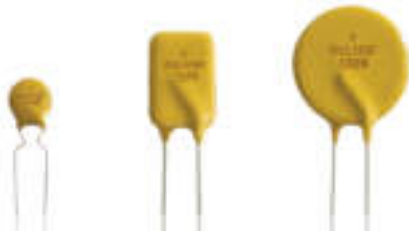
CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX
FRH080-250VF	5.8	9.6	5.0	4.7	4.6
FRH110-250VF	6.8	9.9			3.8
FRH180-250XF	9.0	12.0			

LEAD SIZE
22 AWG
Ø 0.65 mm diameter



CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX
FRH120-250VF	6.5	11.0	5.0	4.7	4.6
FRH145-250VF	6.5	11.0			
FRH150-600MF	9.0	12.5			
FRH160-600MF	9.0	12.5			6.0
FRH200-600VF	12.0	14.0			
FRH400-600F	15.0	14.5			

FRVL Series



LEAD SIZE
24 AWG
Ø 0.51 mm diameter



100 mA ~ 3,75 A FABRIQUE NORM. ac/dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Insulating coating Rivestimento isolante
Flame retardant epoxy Epossidico ignifugo **UL 94 V-0**

Soldering Saldatura MIL-STD-202 met. 208E **Operating temp.** Temp. operativa -40° C / +85° C

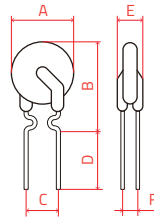
Voltage Tensione 120 V **Terminals** Terminali Cu, Sn plated stagnato

Thermal Derating

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	158%	138%	119%	100%	90%	80%	70%	60%	50%	38%

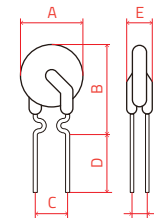
CODE	IH	It	Max T. T.	IMAX	Pd	RMIN Ω	RMAX Ω
FRVL010-120F	100 mA	0.20 A	10.0 s	2 A	0.84 W	3.00	7.50
FRVL017-120F	170 mA	0.34 A	10.0 s	2 A	0.84 W	2.00	7.00
FRVL020-120F	200 mA	0.40 A	9.0 s	2 A	1.08 W	1.83	4.40
FRVL025-120F	250 mA	0.50 A	7.5 s	3 A	1.08 W	1.25	3.00
FRVL030-120F	300 mA	0.60 A	8.5 s	3 A	1.44 W	0.88	2.10
FRVL040-120F	400 mA	0.80 A	6.5 s	3 A	1.44 W	0.55	1.29
FRVL050-120F	500 mA	1 A	6.0 s	3 A	1.56 W	0.50	1.17
FRVL065-120F	650 mA	1.30 A	5.7 s	5 A	1.68 W	0.31	0.72
FRVL070-120F	700 mA	1.50 A	6.3 s	5 A	1.80 W	0.25	0.60
FRVL075-120F	750 mA	1.50 A	15.0 s	7.5 A	2.64 W	0.25	0.69
FRVL090-120F	900 mA	1.80 A	7.2 s	5 A	1.80 W	0.20	0.47
FRVL100-120F	1 A	2 A	15.0 s	10 A	2.64 W	0.18	0.47
FRVL110-120F	1.10 A	2.20 A	8.2 s	8 A	2.28 W	0.15	0.38
FRVL125-120F	1.25 A	2.50 A	20.0 s	12.5 A	2.88 W	0.11	0.33
FRVL130-120F	1.35 A	2.70 A	9.6 s	10 A	2.64 W	0.12	0.30
FRVL135-120F	1.35 A	2.70 A	20.0 s	13.5 A	3.12 W	0.11	0.30
FRVL160-120F	1.60 A	3.20 A	11.4 s	12 A	3.12 W	0.09	0.22
FRVL185-120F	1.85 A	3.70 A	12.6 s	12 A	3.36 W	0.08	0.19
FRVL200-120F	2 A	4.20 A	36.0 s	20 A	4.32 W	0.08	0.21
FRVL250-120F	2.50 A	5 A	15.6 s	15 A	4.44 W	0.05	0.13
FRVL300-120F	3 A	6 A	19.8 s	17 A	4.56 W	0.04	0.10
FRVL375-120F	3.75 A	7.50 A	24.0 s	20 A	4.86 W	0.03	0.08

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRVL010-120F	7.9	13.0	5.1	7.6	3.8	2.2
FRVL017-120F						



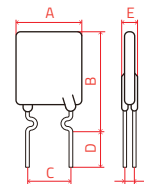
LEAD SIZE
22 AWG
Ø 0.65 mm diameter

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRVL020-120F	7.9	13.0	5.1	7.6	3.8	2.2
FRVL025-120F						
FRVL030-120F						
FRVL040-120F	8.2	14.2				
FRVL050-120F	9.2	14.9				
FRVL065-120F	9.7					
FRVL070-120F	10.6	15.5				
FRVL090-120F	11.9	15.9				



LEAD SIZE
20 AWG
Ø 0.81 mm diameter

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRVL110-120F	13.3	18.3	5.1	7.6	4.1	2.2
FRVL130-120F	15.5	20.6				
FRVL160-120F	17.5	22.5				
FRVL185-120F	19.5	24.9				
FRVL250-120F	22.5	27.5				
FRVL300-120F	25.5	30.0	10.2			
FRVL375-120F	29.5	34.0				



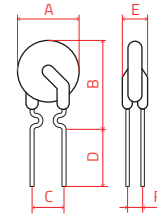
LEAD SIZE
18 AWG
Ø 1.0 mm diameter

CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRVL075-120F	10.9	17.0	5.1	7.6	4.1	2.2
FRVL100-120F	11.5	20.1				
FRVL125-120F	14.0	21.7				
FRVL135-120F	16.3					
FRVL200-120F	23.5	27.9	10.2			

FRV Series



LEAD SIZE
24 AWG
Ø 0.51 mm diameter



50 mA ~ 2 A

FABRIQUE NORM.

ac/dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Insulating coating Flame retardant epoxy **UL 94 V-0**
Rivestimento isolante Epossidico ignifugo

Soldering MIL-STD-202 met. 208E **Operating temp.** -40° C / +85° C
Saldatura Temp. operativa

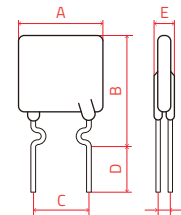
Voltage 240V **Terminals** Cu, Sn plated
Tensione Terminali stagnato

THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	148%	134%	120%	100%	98%	90%	84%	78%	70%	59%

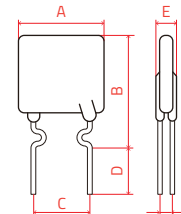
CODE	IH	It	Max T.T.	IMAX	Pd	RMIN Ω	RMAX Ω
FRV005-240F	0.05 A	0.12 A	15.0 s	1 A	0.70 W	18.50	65.00
FRV008-240F	0.08 A	0.19 A	15.0 s	1.2 A	0.80 W	7.40	26.00
FRV010-240F	0.12 A	0.30 A	15.0 s	1.2 A	1 W	3.00	12.00
FRV016-240F	0.16 A	0.37 A	15.0 s	2 A	1.40 W	2.50	7.80
FRV025-240F	0.25 A	0.56 A	18.5 s	3.5 A	1.50 W	1.30	3.80
FRV033-240F	0.33 A	0.74 A	21.0 s	4.5 A	1.70 W	0.83	2.60
FRV040-240F	0.40 A	0.90 A	24.0 s	5.5 A	2 W	0.60	1.90
FRV055-240F	0.55 A	1.25 A	26.0 s	7 A	3.40 W	0.45	0.145
FRV075-240F	0.75 A	1.50 A	18.0 s	7.5 A	2.60 W	0.32	0.84
FRV100-240F	1 A	2 A	21.0 s	10.0 A	2.90 W	0.22	0.58
FRV125-240F	1.25 A	2.50 A	23.0 s	12.5 A	3.30 W	0.17	0.44
FRV150-240F	1.50 A	3 A	23.0 s	15.0 A	3.70 W	0.12	0.32
FRV200-240F	2 A	4 A	28.0 s	2.0 A	4.50 W	0.09	0.22

LEAD SIZE
22 AWG
Ø 0.65 mm diameter



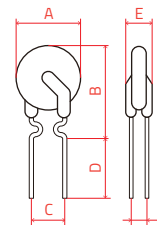
CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRV025-240F	9.6	17.4	5.1	7.6	3.0	1.8
FRV033-240F	11.4	16.5				
FRV040-240F	11.5	19.5				

LEAD SIZE
20 AWG
Ø 0.81 mm diameter



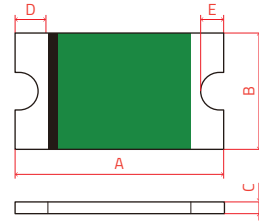
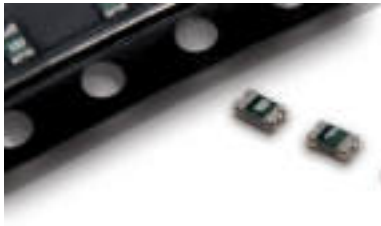
CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRV055-240F	14.0	21.7	5.1	7.6	4.1	1.9
FRV075-240F	11.5	23.7			4.8	
FRV200-240F	24.9	33.8	10.2		6.1	

LEAD SIZE
18 AWG
Ø 1.0 mm diameter



CODE	A MAX	B MAX	C TYPICAL	D MIN	E MAX	F TYPICAL
FRV100-240F	18.7	24.4	10.2	7.6	5.1	1.9
FRV120-240F	12.2	27.4			6.1	
FRV150-240F	23.4	30.9				

FSMD0603 Series



10 mA ~ 200 mA FABRIQUE NORM. dc

On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

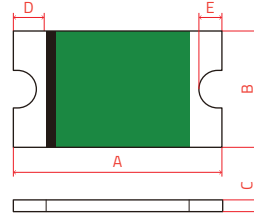
Voltage Tensione	9 V ~ 60 V	Operating temp. Temp. operativa	-40° C / +85° C
Soldering Saldatura	RS 186-9E ANSI/J-std-002 cat. 3	Contacts Contatti	Pure tin Stagno

THERMAL DERATING										
TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	157%	137%	118%	100%	89%	80%	70%	60%	51%	37%

CODE	IH	Voltage	Max T.T.	IMAX	IT	Pd W	RMIN Ω	RMAX Ω
FSMD001-0603-R	0.01 A	60 V	1.00 s	40 A	0.03A	0.5 W	15.00	100.00
FSMD002-0603-R	0.02 A	60 V	1.00 s	40 A	0.06A	0.5 W	12.00	70.00
FSMD003-0603-R	0.03 A	30 V	1.00 s	40 A	0.09A	0.5 W	6.00	50.00
FSMD004-0603-R	0.04A	24 V	1.00 s	40 A	0.12A	0.5 W	4.00	40.00
FSMD005-0603-R	0.05 A	15 V	0.10 s	40 A	0.15A	0.5 W	3.80	03.0
FSMD010-0603-R	0.10 A	15 V	0.10 s	40 A	0.25A	0.5 W	0.90	8.00
FSMD012-0603-R	0.12 A	9 V	0.10 s	40 A	0.30A	0.5 W	1.10	5.80
FSMD016-0603-R	0.16 A	9 V	0.10 s	40 A	0.40A	0.5 W	1.00	4.20
FSMD020-0603-R	0.20 A	9 V	0.10 s	40 A	0.45A	0.5 W	0.5	3.50

CODE FSMD	A		B		C		D		E	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
001-0603-R						0.85				
002-0603-R						0.85				
003-0603-R										
004-0603-R										
005-0603-R	1.40	1.80	0.45	1.00	0.35		0.10	0.50	0.08	0.40
010-0603-R						0.75				
012-0603-R										
016-0603-R										
020-0603-R										

FSMD0805 Series



0,10 A ~ 1 A

FABRIQUE NORM.

dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: scolti [conf. standard] - nastrati [conf. industriale]

Voltage 6 V ~ 24 V **Operating temp.** -40° C / +85° C
Tensione **Temp. operativa**

Soldering RS 186-9E **Contacts** Pure tin
Saldatura ANSI/J-std-002 cat. 3 **Contatti** Stagno

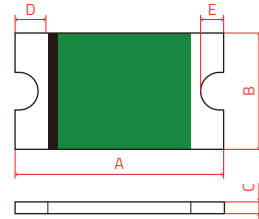
THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	145%	130%	116%	100%	91%	84%	76%	69%	61%	50%

CODE FSMD	IH	IT	IMAX	VMAX	Pd W	Max. TIME to TRIP		RESISTANCE	
						CURRENT	TIME	RMIN Ω	RMAX Ω
010-0805R	0.10 A	0.30 A	15 Vdc	24 Vdc	0.5 W	0.50 A	1.50 s	0.700	6.000
010-24-0805R	0.10 A	0.30 A				0.50 A	1.50 s	0.700	6.000
020-0805R	0.20 A	0.50 A	9 Vdc	6 Vdc	0.5 W	8.0 A	0.02 s	0.400	3.500
035-0805R	0.35 A	0.75 A	6 Vdc				0.10 s	0.250	1.200
050-0805R	0.50 A	1.00 A	6 Vdc	6 Vdc	0.6 W	8.0 A	0.10 s	0.150	0.850
050-9-0805R	0.50 A	1.00 A	9 Vdc				0.10 s	0.150	0.850
075-0805R	0.75 A	1.50 A	6 Vdc	0.6 W	0.20 s	0.090	0.350		
100-0805R	1.00 A	1.50 A	6 Vdc	0.6 W	0.30 s	0.060	0.210		
110-0805R	1.10 A	2.20 A	6 Vdc	0.6 W	0.20 s	0.050	0.170		

CODE FSMD	A		B		C		D		E	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
010-0805R										
010-24-0805R					0.30	1.00				
020-0805R										
035-0805R	2.00	2.30	1.20	1.50			0.10	0.60	0.10	0.45
050-0805R										
050-9-0805R					0.55	1.25				
075-0805R										
100-0805R										
110-0805R										

FSMD1206 Series



0,05 A - 2 A

FABRIQUE NORM.

dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Voltage Tensione 6 V ~ 60 V **Operating temp.** Temp. operativa -40° C / +85° C

Soldering Saldatura RS 186-9E ANSI/J-std-002 cat. 3 **Contacts** Contatti Pure tin Stagno

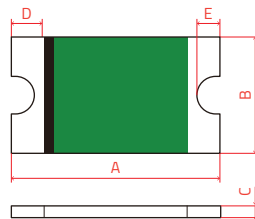
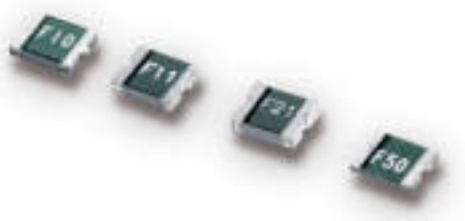
THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	145%	130%	115%	100%	92%	84%	78%	69%	62%	50%

CODE FSMD	IH	It	IMAX	VMAX	Pd W	Max. TIME to TRIP		RESISTANCE	
						CURRENT	TIME	RMIN Ω	RMAX Ω
005-1206R	0.05 A	0.15 A	100 A	60 Vdc	0.4	0.25 A	1.50 s	3.600	50.000
010-1206R	0.10 A	0.25 A		60 Vdc	0.4	0.50 A	1.00 s	1.600	15.000
012-1206R	0.12 A	0.39 A		48 Vdc	0.6	1.00	0.20 s	1.400	6.500
016-1206R	0.16 A	0.45 A		48 Vdc	0.6	1.00	0.30 s	1.100	5.000
020-1206R	0.20 A	0.40 A		30 Vdc	0.4	8.0 A	0.10 s	0.600	2.500
025-1206R	0.25 A	0.50 A		16 Vdc	0.6		0.08 s	0.550	2.300
025-24-1206R	0.25 A	0.50 A		24 Vdc	0.6		0.08 s	0.550	2.300
035-1206R	0.35 A	0.75 A		16 Vdc	0.4		0.10 s	0.300	1.200
035-30-1206R	0.35 A	0.75 A		30 Vdc	0.6		0.10 s	0.300	1.200
050-1206R	0.50 A	1.00 A		8 Vdc	0.4		0.10 s	0.150	0.700
050-24-1206R	0.50 A	1.00 A	24 Vdc	0.6	0.10 s		0.150	0.750	
075-1206R	0.75 A	1.50 A	8 Vdc	0.6	0.20 s		0.090	0.290	
075-16-1206R	0.75 A	1.50 A	16 Vdc	0.6	0.20 s		0.090	0.290	
100-1206R	1.00 A	1.80 A	6 Vdc	0.6	0.30 s		0.055	0.210	
110-1206R	1.10 A	2.20 A	8 Vdc	0.8	0.30 s	0.040	0.180		
110-16-1206R	1.10 A	2.20 A	16 Vdc	0.8	0.30 s	0.040	0.180		
150-1206R	1.50 A	3.00 A	8 Vdc	0.8	1.00 s	0.040	0.120		
200-1206R	2.00 A	3.50 A	6 Vdc	0.8	1.50 s	0.018	0.080		

CODE FSMD	A		B		C		D		E	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
005-1206R					0.45	0.85	0.10			
010-1206R					0.45	0.85	0.10			
012-1206R					0.45	0.85	0.10			
016-1206R					0.45	0.75	0.10			
020-1206R					0.45	0.75	0.10			
025-1206R					0.45	0.75	0.10			
025-24-1206R					0.45	0.75	0.10			
035-1206R					0.30	0.75	0.10			
035-30-1206R	3.00	3.50	1.50	1.80	0.90	1.30	0.25			
050-1206R					0.25	0.55	0.10	0.75	0.10	0.45
050-24-1206R					0.80	1.20	0.25			
075-1206R					0.45	1.25	0.25			
075-16-1206R					0.45	1.25	0.25			
100-1206R					0.45	1.00	0.25			
110-1206R					0.45	1.00	0.25			
110-16-1206R					0.80	1.40	0.25			
150-1206R					0.80	1.40	0.25			
200-1206R					0.85	1.60	0.25			

FSMD1210 Series



0,05 A ~ 2 A

FABRIQUE NORM.

dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Voltage Tensione 6V ~ 60V **Operating temp.** Temp. operativa -40° C / +85° C

Soldering Saldatura RS 186-9E ANSI/J-std-002 cat. 3 **Contacts** Contatti Pure tin Stagno

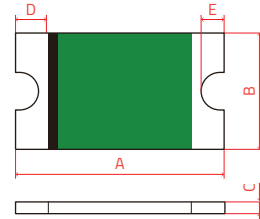
THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	145%	130%	115%	100%	92%	83%	76%	70%	62%	50%

CODE FSMD	IH	It	IMAX	VMAX	Pd W	Max. TIME to TRIP		RESISTANCE	
						CURRENT	TIME	RMIN Ω	RMAX Ω
005-1210R	0.05 A	0.15 A	60 Vdc	60 Vdc	0.60	0.25 A	1.50 s	3.600	50.000
010-1210R	0.10 A	0.25 A				0.50 A	1.50 s	1.600	15.000
020-1210R	0.20 A	0.40 A	30 Vdc	16 Vdc	0.80	8.0 A	0.02 s	0.800	5.000
035-1210R	0.35 A	0.70 A	16 Vdc				0.20 s	0.320	1.300
050-1210R	0.50 A	1.00 A	8 Vdc	24 Vdc	0.80	8.0 A	0.10 s	0.250	0.900
075-1210R	0.75 A	1.50 A	8 Vdc				0.10 s	0.130	0.400
075-24-1210R	0.75 A	1.50 A	8 Vdc	16 Vdc	0.80	8.0 A	0.10 s	0.130	0.400
110-1210R	1.10 A	2.20 A	8 Vdc				0.30 s	0.060	0.210
110-16-1210R	1.10 A	2.20 A	16 Vdc	6 Vdc	0.80	8.0 A	0.30 s	0.060	0.210
150-1210R	1.50 A	3.00 A	6 Vdc				0.50 s	0.040	0.110
175-1210R	1.75 A	4.00 A	6 Vdc	6 Vdc	0.80	8.0 A	0.60 s	0.020	0.080
200-1210R	2.00 A	4.00 A	6 Vdc				1.00 s	0.015	0.070

CODE FSMD	A		B		C		D		E	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
005-1210R					0.60	1.15				
010-1210R					0.60	1.15				
020-1210R					0.40	0.85				
035-1210R					0.40	0.80				
050-1210R					0.30	0.75				
075-1210R					0.30	0.70				
075-24-1210R	3.00	3.43	2.35	2.80	0.80	1.20	0.25	0.75	0.10	0.45
110-1210R					0.60	1.00				
110-16-1210R					0.60	1.00				
150-1210R					0.50	0.90				
175-1210R					0.80	1.40				
200-1210R					0.80	1.40				

FSMD1812 Series



100 mA ~ 3 A FABRIQUE NORM. dc

On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Voltage Tensione 6V ~ 60V **Operating temp.** Temp. operativa -40° C / +85° C

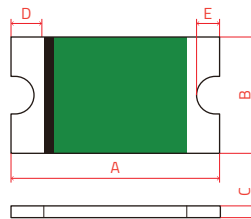
Soldering Saldatura ANSI/J-std-002 cat. 3 **Contacts** Contatti Pure tin Stagno

THERMAL DERATING										
TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	145%	130%	116%	100%	91%	84%	78%	69%	61%	50%

CODE	IH	IT	IMAX	Voltage	Pd W	Max. TIME to TRIP		RESISTANCE	
						CURRENT	TIME	RMIN Ω	RMAX Ω
FSMD010-R	0.10 A	0.30 A		60 V			0.020s	1600	15.000
FSMD014-R	0.14 A	0.30 A		60 V			0.008s	1200	6.500
FSMD020-R	0.20 A	0.40 A		30 V			0.020s	0.800	5.000
FSMD020-60R	0.20 A	0.40 A		60 V	0.8		0.020s	0.800	5.000
FSMD030-R	0.30 A	0.60 A		30 V			0.100s	0.200	1.750
FSMD035-R	0.35 A	0.70 A		16 V			0.100s	0.320	1.500
FSMD035-30R	0.35 A	0.70 A		30 V			0.10s	0.320	1.500
FSMD050-R	0.50 A	1.00 A		16 V			0.150s	0.150	1.000
FSMD050-30R	0.50 A	1.00 A		30 V			0.150s	0.150	1.000
FSMD075-R	0.75 A	1.50 A		16 V			0.200s	0.110	0.450
FSMD075-24R	0.75 A	1.50 A		24 V	1.0		0.200s	0.110	0.290
FSMD075-33R	0.75 A	1.50 A		33 V	1.0		0.200s	0.110	0.400
FSMD110-R	1.10 A	2.20 A		8 V	0.8		0.300s	0.040	0.210
FSMD110-16R	1.10 A	2.20 A		16 V	0.8		0.500s	0.060	0.180
FSMD110-24R	1.10 A	2.20 A		24 V	1.0		0.500s	0.060	0.200
FSMD110-33R	1.10 A	2.20 A	100 A	33 V	1.0	8.0 A	0.500s	0.060	0.200
FSMD125-R	1.25 A	2.50 A		6 V			0.400s	0.050	0.140
FSMD125-16R	1.25 A	2.50 A		16 V	0.8		0.400s	0.050	0.140
FSMD150-R	1.50 A	3.00 A		8 V			0.500s	0.040	0.110
FSMD150-12R	1.50 A	3.00 A		12 V	1.0		0.500s	0.040	0.110
FSMD150-24R	1.50 A	3.00 A		24 V	1.0		1500s	0.040	0.120
FSMD160-R	1.60 A	3.20 A		8 V	0.8		0.500s	0.030	0.100
FSMD160-12R	1.60 A	3.20 A		12 V			1000s	0.030	0.100
FSMD160-16R	1.60 A	3.20 A		16 V			1000s	0.030	0.100
FSMD160-24R	1.60 A	3.20 A		24 V	1.0		1000s	0.030	0.100
FSMD200-R	2.00 A	3.50 A		8 V			2000s	0.020	0.070
FSMD200-16R	2.00 A	3.50 A		16 V			5000s	0.020	0.085
FSMD260-R	2.60 A	5.00 A		8 V			2500s	0.015	0.047
FSMD260-13R	2.60 A	5.00 A		13.2 V	1.3		5000s	0.015	0.050
FSMD260-16R	2.60 A	5.00 A		16 V	1.3		5000s	0.015	0.050
FSMD300-R	3.00 A	5.00 A		6 V	1.0		4000s	0.012	0.040

CODE FSMD +	A		B		C		D		E	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
010-R										
014-R										
020-R					0.60	0.90				
020-60R										
030-R					0.40	0.70	0.30			
035-R					0.40	0.70				
050-R					0.35	0.65				
050-30R					0.45	0.75				
075-R					0.35	0.65				
075-24R					0.80	1.55	0.25			
075-33R					0.80	1.55	0.25			
110-R					0.25	0.55	0.30			
110-16R					0.25	0.90	0.30			
110-24R					0.80	1.30	0.25			
110-33R	4.37	4.73	3.07	3.41	0.80	1.30	0.25	0.95	0.25	0.65
125-R					0.25	0.55	0.30			
125-16R					0.50	1.00	0.30			
150-R					0.25	0.55	0.30			
150-12R					0.60	1.10	0.25			
150-24R					0.60	1.55	0.25			
160-R					0.25	0.90	0.30			
160-12R					0.60	1.35				
160-16R					0.60	1.35				
160-24R					0.55	1.20				
200-R					0.55	1.35				
160-R					0.60	1.55	0.25			
160-12R					0.55	1.20				
160-16R						1.20				
160-24R					0.80	1.55				
200-R						1.55				

FSMD2016



300 mA ~ 2 A

FABRIQUE NORM.

dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Voltage 6V ~ 60V **Operating temp.** -40° C / +85° C
Tensione Temp. operativa

Soldering RS 186-9E **Connection** Pure tin
Saldatura ANSI/J-std-002 cat. 3 Conessione Stagno

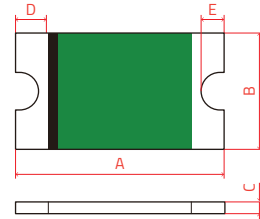
CODE FSMD +	A		B		C		D		E	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
030-2016R						1.15				
050-2016R					0.40	1.70				
075-2016R						1.70				
100-2016R	4.72	5.44	3.70	4.43	0.30	0.70	0.30	1.50	0.25	0.65
100-33-2016R					0.30	0.70				
150-2016R					0.25	0.65				
200-2016R					0.25	0.65				

THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	157%	133%	118%	100%	90%	80%	70%	60%	51%	36%

CODE FSMD +	IH	Voltage	It	Max T.T.	IMAX	Pd	RMIN Ω	RMAX Ω
030-2016R	0.30 A	60 V	0.60 A	3.0s	100 A	1.4 W	0.500	2.300
050-2016R	0.50 A	60 V	1.10 A	5.0s	100 A	1.4 W	0.450	1.000
075-2016R	0.75 A	60 V	1.50 A	0.5s	100 A	1.4 W	0.130	0.900
100-2016R	1.10 A	15 V	2.20 A	0.5s	100 A	1.4 W	0.700	0.400
100-33-2016R	1.10 A	33 V	2.20 A	0.5s	100 A	1.4 W	0.700	0.400
150-2016R	1.50 A	15 V	3.0 A	0.8s	100 A	1.4 W	0.050	0.180
200-2016R	2.0 A	6 V	4.20 A	3.0s	100 A	1.4 W	0.030	0.180

FSMD2920 Series



300 mA ~ 5 A

FABRIQUE NORM.

dc



On request: loose [std. packaging] - reel [ind. packaging]
Su richiesta: sciolti [conf. standard] - nastri [conf. industriale]

Voltage Tensione 6 V ~ 60 V **Operating temp.** Temp. operativa -40° C / +85° C

Soldering Saldatura RS 186-9E ANSI/J-std-002 cat. 3 **Contacts** Contatti Pure tin Stagno

THERMAL DERATING

TEMPERATURE TEMPERATURA	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
IH & It %	158%	138%	119%	100%	90%	81%	72%	60%	50%	36%

CODE FSMD	IH	IT	IMAX	VMAX	Pd W	Max. TIME to TRIP		RESISTANCE	
						CURRENT	TIME	RMIN Ohms	RMAX Ohms
030-2920R	0.30 A	0.60 A	60 Vdc	60 Vdc	1.5	1.5 A	30s	1.000	4.800
050-2920R	0.50 A	1.00 A	60 Vdc	60 Vdc	1.5	2.5 A	40s	0.300	1.400
075-2920R	0.75 A	1.50 A	33 Vdc	33 Vdc	1.5	8.0 A	0.3s	0.180	1.000
075-60-2920R	0.75 A	1.50 A	60 Vdc	60 Vdc	1.5	8.0 A	0.3s	0.180	1.000
100-2920R	1.10 A	2.20 A	33 Vdc	33 Vdc	1.5	8.0 A	0.5s	0.090	0.410
100-60-2920R	1.00 A	2.00 A	60 Vdc	60 Vdc	1.5	8.0 A	0.5s	0.090	0.410
125-2920R	1.25 A	2.50 A	33 Vdc	33 Vdc	1.5	8.0 A	2.0s	0.050	0.250
150-2920R	1.50 A	3.00 A	33 Vdc	33 Vdc	1.5	8.0 A	2.0s	0.050	0.230
185-2920R	1.85 A	3.70 A	33 Vdc	33 Vdc	1.5	8.0 A	2.5s	0.040	0.150
200-2920R	2.00 A	4.00 A	100 A	16 Vdc	1.5	8.0 A	4.5s	0.035	0.120
200-24-2920R	2.00 A	4.00 A	24 Vdc	24 Vdc	1.5	8.0 A	50s	0.035	0.120
250-2920R	2.50 A	5.00 A	16 Vdc	16 Vdc	1.5	8.0 A	160s	0.025	0.085
260-2920R	2.60 A	5.20 A	6 Vdc	6 Vdc	1.5	8.0 A	200s	0.020	0.075
260-24-2920R	2.60 A	5.20 A	24 Vdc	24 Vdc	1.5	8.0 A	200s	0.020	0.075
300-2920R	3.00 A	5.20 A	6 Vdc	6 Vdc	1.5	8.0 A	250s	0.010	0.048
300-15-2920R	3.00 A	5.20 A	15 Vdc	15 Vdc	1.5	8.0 A	200s	0.010	0.048
300-24-2920R	3.00 A	5.20 A	24 Vdc	24 Vdc	1.5	8.0 A	200s	0.010	0.048
400-16-2920R	4.00 A	8.00 A	16 Vdc	16 Vdc	1.5	200 A	4.0s	0.010	0.040
500-16-2920R	5.00 A	10.0 A	16 Vdc	16 Vdc	1.5	200 A	5.0s	0.005	0.025

CODE FSMD	A		B		C		D		E	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
030-2920R					0.60	1.15				
050-2920R					0.60	1.15				
075-2920R					0.40	1.15				
075-60-2920R					0.60	1.15				
100-2920R					0.40	1.00				
100-60-2920R					0.40	1.70				
125-2920R					0.40	0.90				
150-2920R					0.40	0.90				
185-2920R					0.30	0.90				
200-2920R	6.73	7.98	4.80	5.44	0.30	0.90	0.50	1.20	0.50	0.90
200-24-2920R					0.20	0.80				
250-2920R					0.30	0.90				
260-2920R					0.30	0.90				
260-24-2920R					0.65	1.15				
300-2920R					0.40	0.90				
300-15-2920R					0.40	1.15				
300-24-2920R					0.65	1.15				
400-16-2920R					0.40	1.50				
500-16-2920R					0.40	1.50				

All Pictures shown are for illustration purpose only. Specifications are subject to change without notice

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