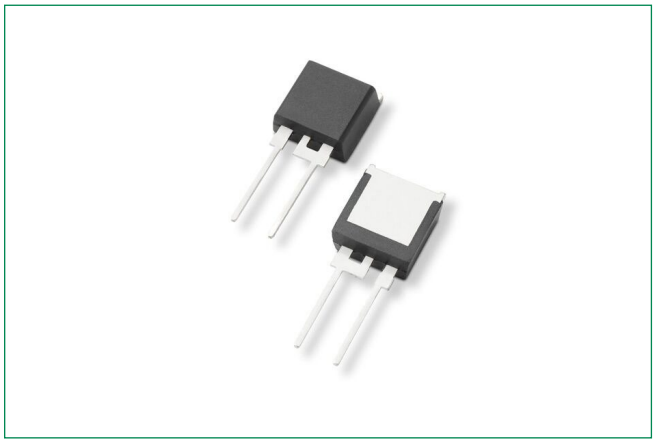
PxxxOFNL series

3kA SIDACtor® -TO-262M



Description

The Pxxx0FNL series - 3kA SIDACtor® - TO-262M are bi-directional protection thyristor devices designed to be used in series with clamping device such as varistors or TVS diode for protecting AC power input lines.

This Series is ideal for use in outdoor LED lighting, CATV network, power supply and inverter applications.

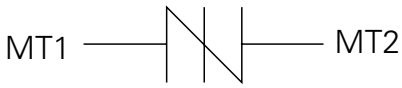
Features & Benefits

- 3kA 8/20 surge rating
- AEC-Q compliant
- AC mains protection between L -N
- Low overshoot voltage
- Low on-state voltage
- Surge capability does not degrade after multiple events within its surge ratings
- Fails short circuit if surged in excess of its surge rating
- Fast response in nanoseconds
- Pb-free E3 means 2nd level interconnect is Pb-free and the terminal finish material is tin(Sn) (IPC/JEDEC J-STD-609A.01)
- RoHS-compliant and halogen-free
- Recognized to UL 497B as an Isolated Loop Circuit Protector

Agency Approvals

Agency	Agency File Number
	E133083

Schematic Symbol



Electrical Characteristics

Part Number	Marking	V_{DRM} @I_{DRM}=5µA	V_S @100V/µs	I_H	I_S	I_T	V_T @I_T=2.2 A	Capacitance @1MHz, 2V bias	
		V min	V max	mA min	mA max	A max	V max	pF min	pF max
P0640FNL	P0640FN	58	77	50	800	2.2	4	250	550
P0720FNL	P0720FN	65	88	50	800	2.2	4	250	550
P0900FNL	P0900FN	75	98	50	800	2.2	4	250	550
P1100FNL	P1100FN	90	130	50	800	2.2	4	250	450
P1300FNL	P1300FN	120	160	50	800	2.2	4	250	450
P1500FNL	P1500FN	140	180	50	800	2.2	4	250	450
P1900FNL	P1900FN	155	220	50	800	2.2	4	250	450
P2300FNL	P2300FN	180	260	50	800	2.2	4	250	450
P2600FNL	P2600FN	220	300	50	800	2.2	4	250	450
P3100FNL	P3100FN	275	350	50	800	2.2	4	250	450
P3500FNL	P3500FN	320	400	50	800	2.2	4	250	450

Notes:
- Absolute maximum ratings measured at T_A= 25°C (unless otherwise noted).
- Components are bi-directional (unless otherwise noted).

© 2026 Littelfuse, Inc.
Specifications are subject to change without notice.
Revised: MI. 10/30/26

PxxxOFNL series
3kA SIDACtor® -TO-262M

Surge Ratings

Series	I_{PP} 1.2/50[1] 8/20[2]	I_{TSM} 50 / 60 Hz	di/dt
	A min	A min	A/µs max
N	3000	300	330

Notes:

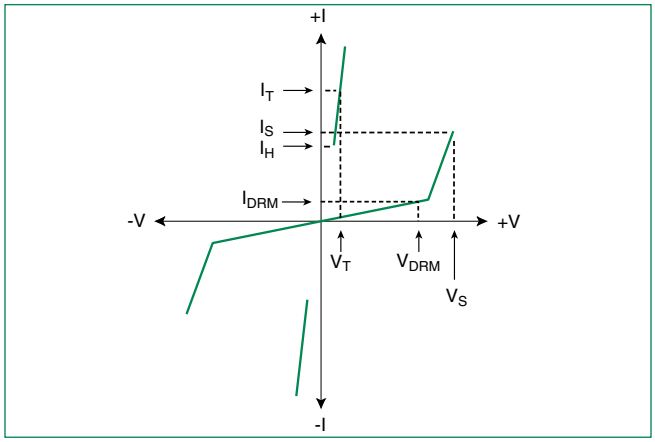
1 Voltage waveform in µs
2 Current waveform in µs

- Peak pulse current rating (I_{PP}) is repetitive and guaranteed for the life of the product.

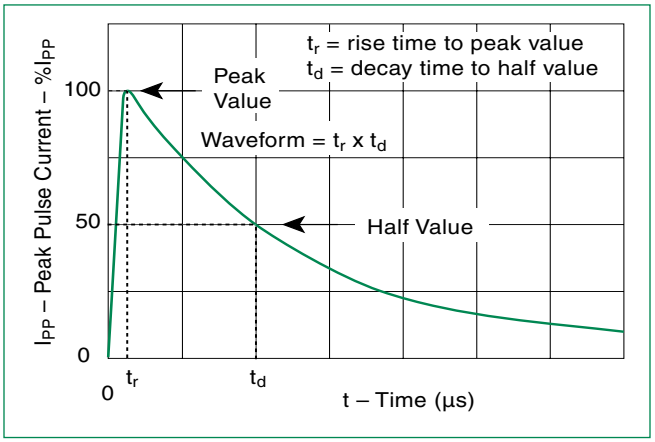
Thermal Considerations

Symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature Range	-55 to +125	°C
T_S	Storage Temperature Range	-55 to +150	°C
$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	75	°C/W

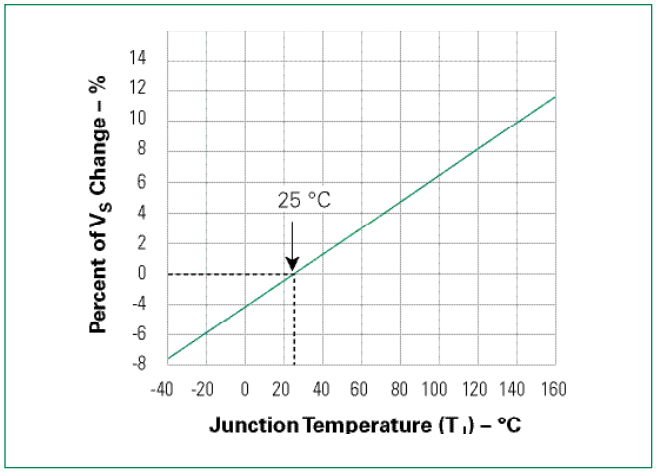
V-I Characteristics



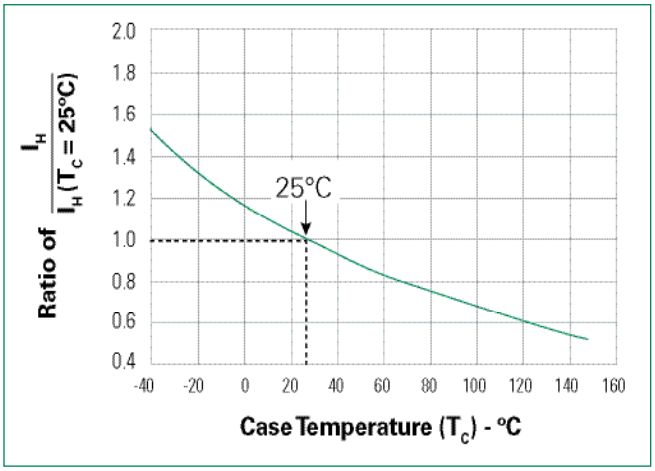
t_r x t_d Pulse Waveform



Normalized V_S Change vs. Junction Temperature



Normalized DC Holding Current vs. Case Temperature



© 2026 Littelfuse, Inc.
Specifications are subject to change without notice.
Revised: MI. 10/30/26

Pxxx0FNL series
3kA SIDACtor®-TO-262M

Wave Soldering Parameters

Pre Heat (depending on flux only)	**-Temperature Min ($T_{s(min)}$)**	+150°C
	-Temperature Max ($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Solder Pot Temperature		245-265°C (Max)
Solder Dwell Time		2-3.5 sec.
Cooling		-6°C/sec. (Max)

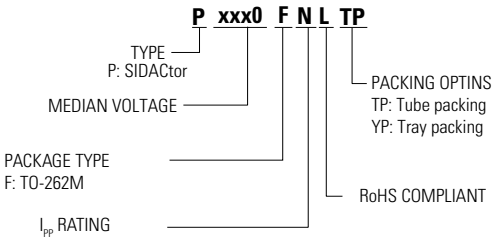
Physical Specifications

Lead Material	Copper Alloy
Terminal Finish	100% Matte-Tin Plated
Body Material	UL Recognized epoxy meeting flammability classification V-0

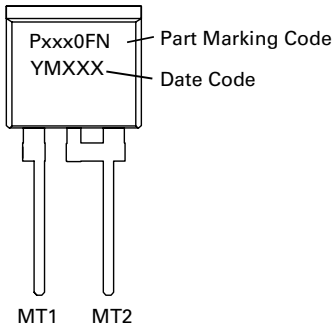
Environmental Specifications

High Temp Voltage Blocking	80% Rated V_{DRM} (V_{AC} Peak) T_J, 1008 hrs. MIL-STD-750 (Method 1040) JEDEC, JESD22-A-101
Temp Cycling	-55°C to +150°C, 1000cycles. JESD22-A104
Biased Temp & Humidity	80% Rated V_{DRM} up to a maximum of 100V, (+85°C) 85%RH, 1008 hrs. EIA/JEDEC, JESD22-A-101
High Temp Storage	+150°C 1008 hrs. MIL-STD-750 (Method 1031) JEDEC, JESD22-A-101
UHAST	96 hours at T_A=130°C/85%RH, JESD22A-118
Resistance to Solder Heat	+260°C, 30 secs. MIL-STD-750 (Method 2031)

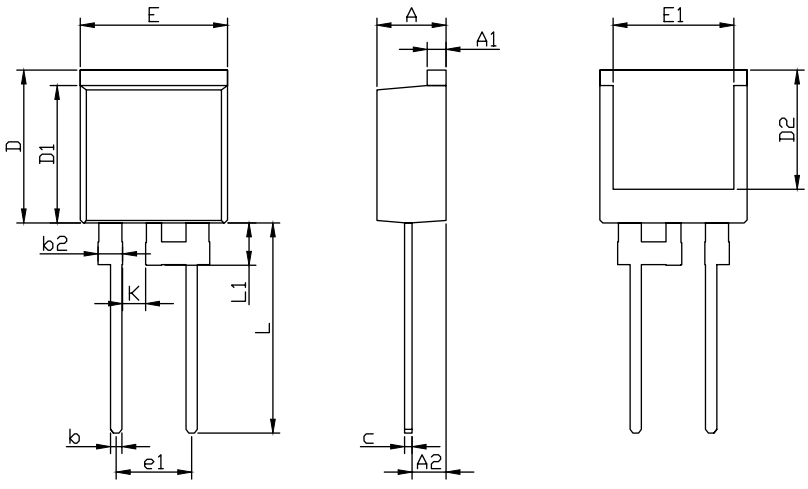
Part Numbering



Part Marking



Dimensions - TO-262M (Isolated)



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.178	0.188	4.52	4.78
A1	0.045	0.060	1.14	1.52
A2	0.080	0.115	2.03	2.92
b	0.025	0.035	0.64	0.89
b2	0.060	0.080	1.52	2.03
c	0.018	0.024	0.46	0.61
D	0.394	0.434	10.01	11.03
D1	0.345	0.385	8.75	9.77
D2	0.310	0.350	7.86	8.88
E	0.380	0.420	9.65	10.67
E1	0.302	0.342	7.66	8.68
e1	0.190	0.210	4.82	5.32
K	0.046	0.066	1.16	1.67
L	0.530	0.580	13.46	14.72
L1	0.105	0.130	2.66	3.30

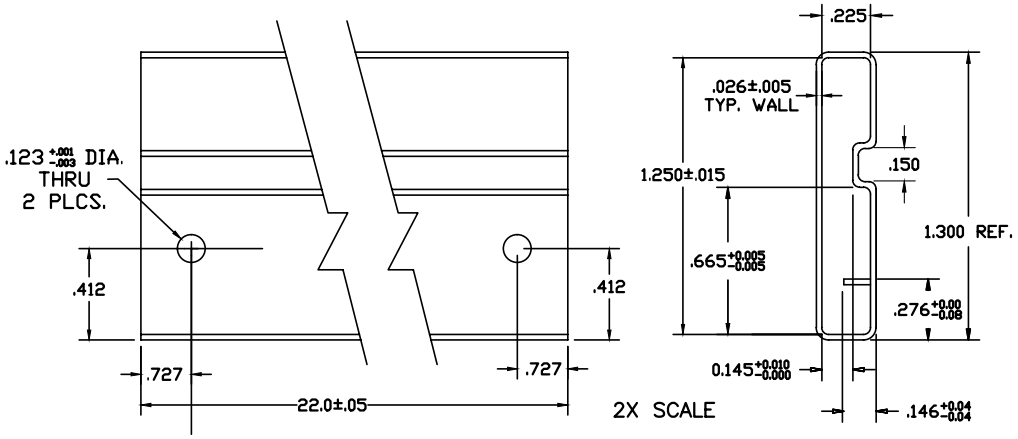
© 2026 Littelfuse, Inc.
Specifications are subject to change without notice.
Revised: MI. 10/30/26

PxxxOFNL series
3kA SIDACtor®-TO-262M

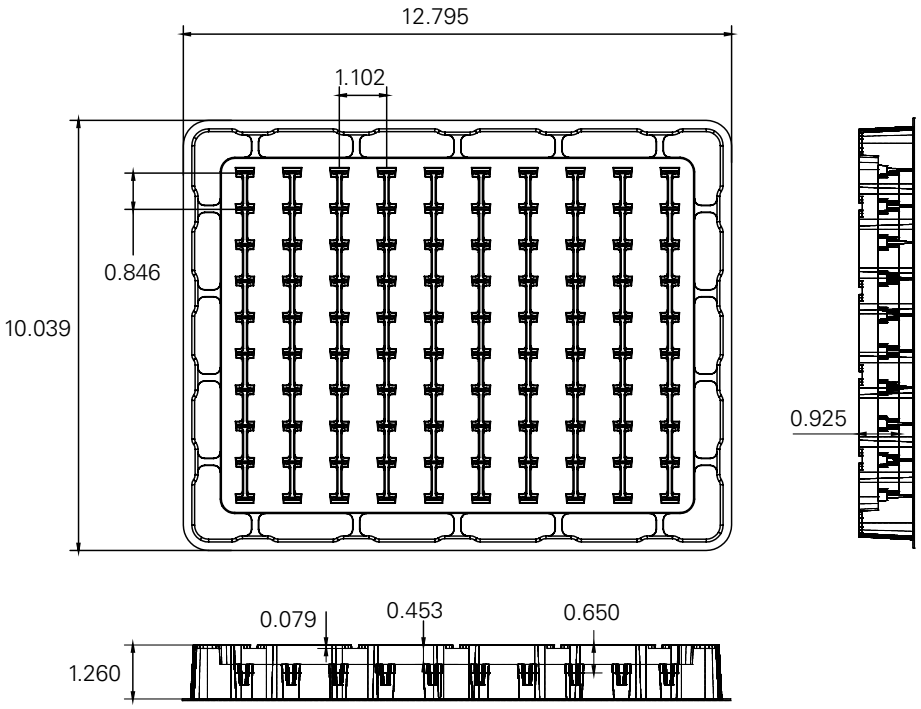
Packing Options

Part No.	Marking	Weight	Packing Mode	Base Quantity
PxxxOFNLTP	PxxxOFN	1.62g	Tube pack	500 (50 per tube)
PxxxOFNLYP	PxxxOFN	1.62g	Tray pack	200 (100per tray)

Tube Pack Specification — TO-262M (Isolated)



Tray Pack Specification — TO-262M (Isolated)



Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at www.littelfuse.com/disclaimer-electronics.

© 2026 Littelfuse, Inc.
Specifications are subject to change without notice.
Revised: MI. 10/30/26