

XTRUDED HEAT SINKS FOR POWER SEMICONDUCTORS

401 and 403 SERIES

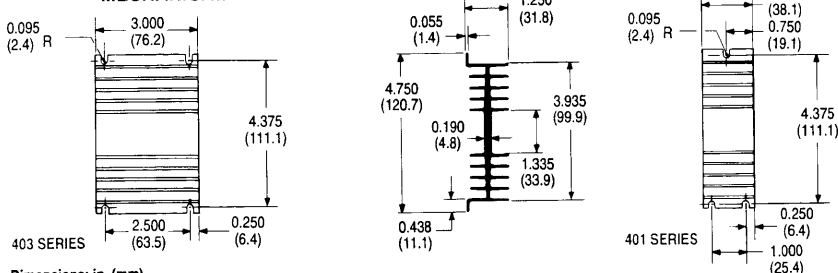
Double-Surface Heat Sinks for TO-3 Case Styles

TO-3; STUD-MOUNT

Standard P/N	Width	Overall Dimensions Length	Height	Semiconductor Mounting Hole Pattern	Thermal Performance at Typical Load Natural Convection	Thermal Performance at Typical Load Forced Convection	Weight lbs (grams)
401A ▲	4.750 in. (120.7)	1.500 in. (38.1)	1.250 in. (31.8)	(1) TO-3	80°C @ 30W	1.5°C/W @ 250 LFM	0.1500 (68.04)
401F	4.750 in. (120.7)	1.500 in. (38.1)	1.250 in. (31.8)	0.270 in. (6.9)-Dia Hole	80°C @ 30W	1.5°C/W @ 250 LFM	0.1500 (68.04)
401K ▲	4.750 in. (120.7)	1.500 in. (38.1)	1.250 in. (31.8)	None	80°C @ 30W	1.5°C/W @ 250 LFM	0.1500 (68.04)
403A ▲	4.750 in. (120.7)	3.000 in. (76.2)	1.250 in. (31.8)	(1) TO-3	55°C @ 30W	0.9°C/W @ 250 LFM	0.3500 (158.76)
403F	4.750 in. (120.7)	3.000 in. (76.2)	1.250 in. (31.8)	0.270 in. (6.9)-Dia Hole	55°C @ 30W	0.9°C/W @ 250 LFM	0.3500 (158.76)
403K ▲	4.750 in. (120.7)	3.000 in. (76.2)	1.250 in. (31.8)	None	55°C @ 30W	0.9°C/W @ 250 LFM	0.3500 (158.76)

With fins oriented vertically in cabinet sidewall applications, 401 and 403 Series heat sinks are recommended for critical space applications where maximum heat dissipation is required for high-power TO-3 case styles. Forced convection performance is also exemplary with these double surface fin types. Semiconductor mounting hole style "F" offers a single centered 0.270 in. (6.9)-diameter mounting hole (with a 0.750 in. (19.1)-diameter area free of anodize) for mounting stud-type diodes and rectifiers. Hole pattern "V" available upon request. Material: aluminum alloy, black anodized.

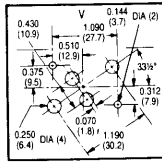
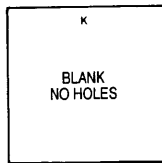
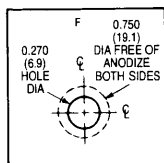
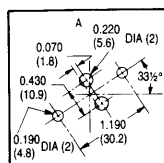
MECHANICAL DIMENSIONS



403 SERIES

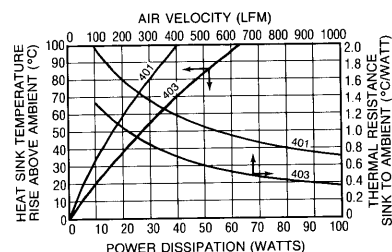
Dimensions: in. (mm)

SEMICONDUCTOR MOUNTING HOLES



401 AND 403 SERIES
(EXTRUSION PROFILE 1024)

NATURAL AND FORCED CONVECTION CHARACTERISTICS



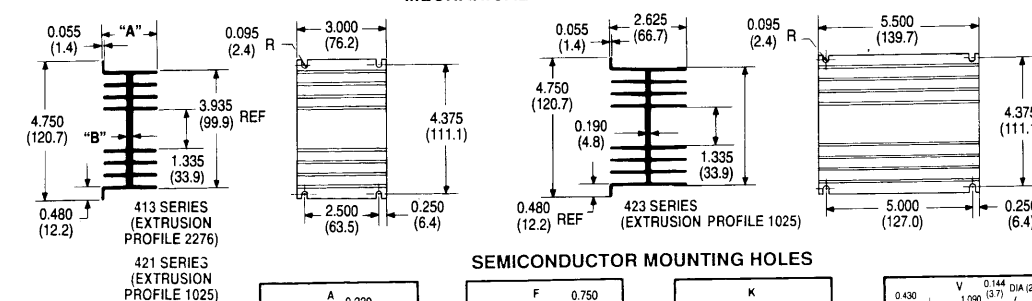
413/421/423 SERIES Low-Height Double-Surface Heat Sinks for TO-3 Case Styles and Diodes

TO-3; DO-5; STUD-MOUNT

Standard P/N	Width	Nominal Dimensions Length	Height "A"	Semiconductor Mounting Hole Pattern	Thermal Performance at Typical Load Natural Convection	Thermal Performance at Typical Load Forced Convection	Weight lbs (grams)
413A ▲	4.750 in. (120.7)	3.000 in. (76.2)	1.875 in. (47.6)	(1) TO-3	72°C @ 50W	0.85°C/W @ 250 LFM	0.6300 (285.77)
413F	4.750 in. (120.7)	3.000 in. (76.2)	1.875 in. (47.6)	0.270 in. (6.9)-Dia Hole	72°C @ 50W	0.85°C/W @ 250 LFM	0.6300 (285.77)
413K ▲	4.750 in. (120.7)	3.000 in. (76.2)	1.875 in. (47.6)	None	72°C @ 50W	0.85°C/W @ 250 LFM	0.6300 (285.77)
421A	4.750 in. (120.7)	3.000 in. (76.2)	2.625 in. (66.7)	(1) TO-3	58°C @ 50W	0.7°C/W @ 250 LFM	0.6300 (285.77)
421F	4.750 in. (120.7)	3.000 in. (76.2)	2.625 in. (66.7)	0.270 in. (6.9)-Dia Hole	58°C @ 50W	0.7°C/W @ 250 LFM	0.6300 (285.77)
421K ▲	4.750 in. (120.7)	3.000 in. (76.2)	2.625 in. (66.7)	None	58°C @ 50W	0.7°C/W @ 250 LFM	0.6300 (285.77)
423A	4.750 in. (120.7)	5.500 in. (140.2)	2.625 in. (66.7)	(1) TO-3	47°C @ 50W	0.5°C/W @ 250 LFM	1.1700 (530.71)
423K ▲	4.750 in. (120.7)	5.500 in. (140.2)	2.625 in. (66.7)	None	47°C @ 50W	0.5°C/W @ 250 LFM	1.1700 (530.71)

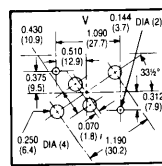
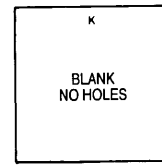
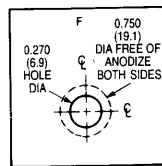
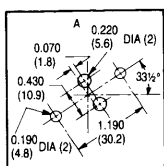
Space-saving double surface 413, 421, and 423 Series utilize finned surface area on both sides of the power semiconductor mounting surface to provide maximum heat dissipation in a compact profile. Ready to install on popular power components in natural and forced convection applications. Apply Wakefield Type 126 silicon-free thermal compound or Wakefield DeltaPad™ interface materials for maximum performance. Material: aluminum alloy, black anodized.

MECHANICAL DIMENSIONS



SERIES "A" "B"
413 1.875 (47.6) 0.200 (5.1)
421 2.625 (66.7) 0.190 (4.8)

Dimensions: in. (mm)



NATURAL AND FORCED CONVECTION CHARACTERISTICS

