

DIGITRON SEMICONDUCTORS

3N253-3N259

SINGLE PHASE BRIDGE RECTIFIER

Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

MAXIMUM RATINGS (@ 25°C ambient temperature unless otherwise noted)

Rating	Symbol	3N253	3N254	3N255	3N256	3N257	3N258	3N259	Units	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts	
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts	
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts	
Maximum average forward output rectified current at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	2.0							Amps	
Peak forward surge current single half-sine wave superimposed on rated load $T_J = 150^\circ\text{C}$	I_{FSM}	60.0							Amps	
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	15.0							A^2s	
Typical thermal resistance per leg ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JL}$					30.0 11.0				$^\circ\text{C}/\text{W}$
Operating and storage temperature range	T_J, T_{stg}	-55 to +165							$^\circ\text{C}$	

Note 1: Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.47 x 0.47" copper pads.

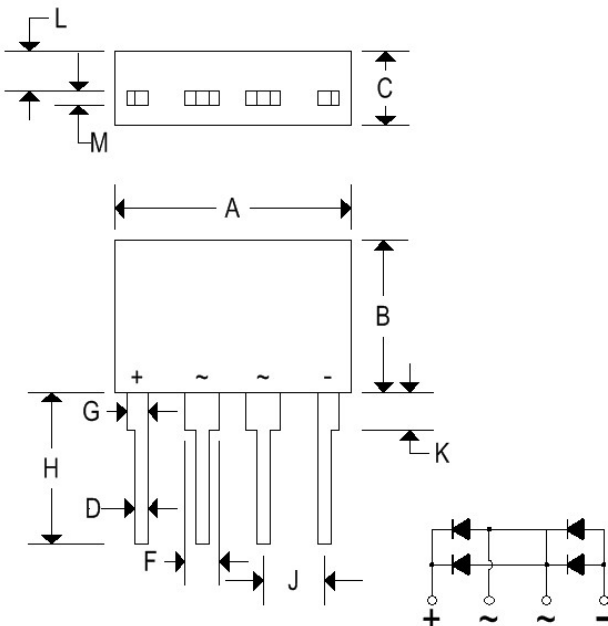
ELECTRICAL CHARACTERISTICS (@ 25°C ambient temperature unless otherwise noted)

Characteristic	Symbol	3N253	3N254	3N255	3N256	3N257	3N258	3N259	Units	
Maximum instantaneous forward voltage drop per leg at 3.14A	V_F	1.1							Volts	
Maximum DC reverse current at rated DC blocking voltage per leg $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R					5 500				μA
Typical junction capacitance	C_J	25							pF	

Note 2: Measured at 1.0MHz and applied reverse voltage of 4.0V.

MECHANICAL CHARACTERISTICS

Case	Digi M
Marking	Body painted, alpha-numeric
Pin out	See below



	Digi M			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.580	0.620	14.732	15.748
B	0.360	0.400	9.144	10.160
C	0.185	0.195	4.699	4.953
D	0.025	0.035	0.635	0.889
F	0.080	0.090	2.032	2.286
G	0.040	0.055	1.016	1.397
H	0.390	0.430	9.906	10.922
J	0.145	0.160	3.683	4.064
K	0.080	0.090	2.032	2.286
L	0.090	0.110	2.286	2.794
M	0.025	0.035	0.635	0.889

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