

# DIGITRON SEMICONDUCTORS

MR1120-MR1126, MR1128, MR1130

12A STANDARD RECOVERY RECTIFIER

## MAXIMUM RATINGS

Rating	Symbol	MR									Unit
		1120	1121	1122	1123	1124	1125	1126	1128	1130	
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	50	100	200	300	400	500	600	800	1000	V
Non-repetitive peak reverse voltage (½ wave, single phase, 60 cycle peak)	$V_{RSM}$	100	200	300	400	500	600	720	1000	1200	V
RMS reverse voltage	$V_{R(RMS)}$	35	70	140	210	280	350	420	560	700	V
Average rectified forward current (Rated $V_R$ )	$I_O$	12 @ $T_C = 150^\circ C$									A
Peak repetitive forward current	$I_{FRM}$	75 @ $T_C = 150^\circ C$									A
Non-repetitive peak surge current (superimposed on rated current at rated voltage, $T_C = 150^\circ C$ )	$I_{FSM}$	300 for ½ cycle									A
$I^2t$ rating (non repetitive, 1ms < t < 8.3ms)	$I^2t$	375									$A_{(rms)}^2S$
Operating and storage junction temperature range	$T_J, T_{stg}$	-65 to +190									$^\circ C$
Maximum thermal resistance Junction to case	$R_{\theta JC}$	2.5									$^\circ C/W$

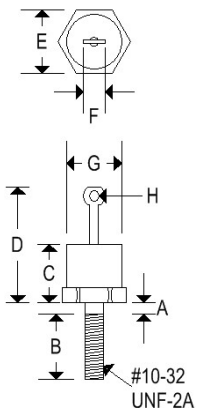
## ELECTRICAL CHARACTERISTICS ( $T_L = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	MR									Unit
		1120	1121	1122	1123	1124	1125	1126	1128	1130	
Full cycle average forward voltage drop ( $I_O = 12A$ and rated $V_R$ , $T_C = 150^\circ C$ , half wave)	$V_{F(AV)}$	0.55									V
DC forward voltage drop ( $I_F = 12Adc$ , $T_C = 25^\circ C$ )	$V_F$	1.0									V
Full cycle average reverse current ( $I_O = 12A$ and rated $V_R$ , $T_C = 150^\circ C$ , half wave)	$I_{R(AV)}$	1.5									mA
DC reverse current (Rated $V_R$ , $T_C = 25^\circ C$ )	$I_R$	0.5									mA

Note 1: Pulse test: Pulse width = 300µs, duty cycle = 2.0%.

## MECHANICAL CHARACTERISTICS

Case	DO-4(R)
Marking	Alpha-numeric
Normal polarity	Cathode is stud
Reverse polarity	Anode is stud (add "R" suffix)



	DO-4(R)			
	Inches		Millimeters	
	Min	Max	Min	Max
A	-	0.078	-	1.981
B	0.422	0.453	10.719	11.506
C	-	0.405	-	10.287
D	-	0.800	-	20.320
E	0.420	0.440	10.668	11.176
F	-	0.250	-	6.350
G	-	0.424	-	10.770
H	0.066	-	1.676	-

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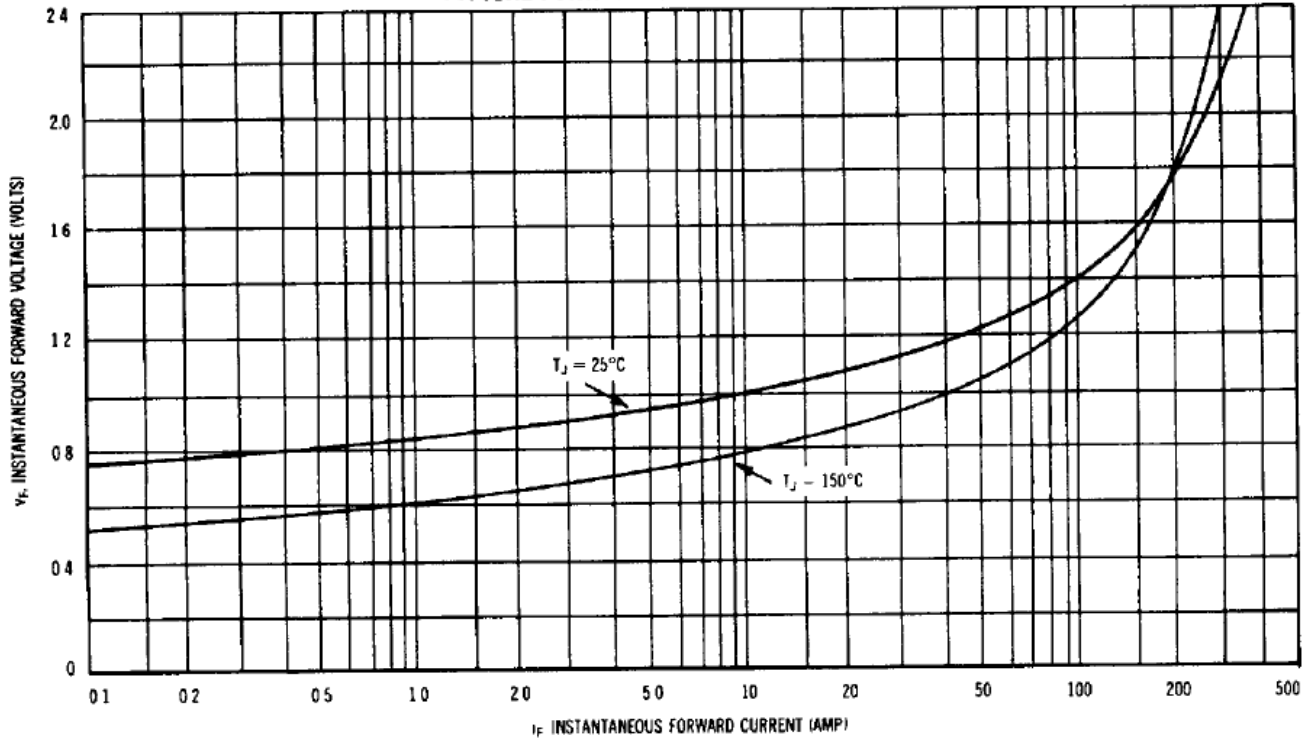
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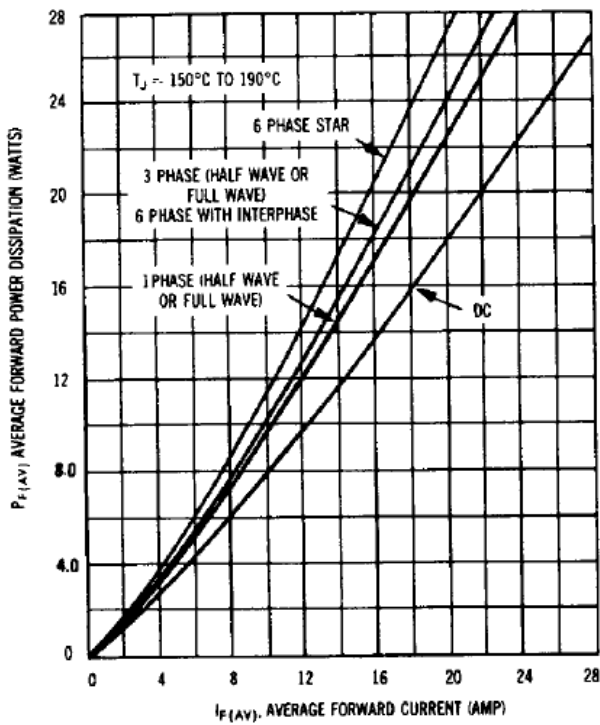
Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

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

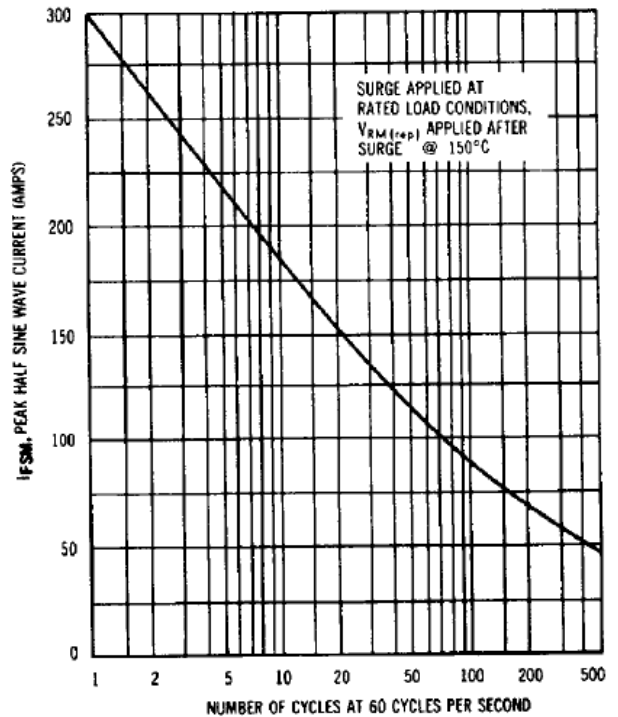
**TYPICAL FORWARD CHARACTERISTICS**



**FORWARD POWER DISSIPATION**



**MAXIMUM ALLOWABLE SURGE CURRENT**

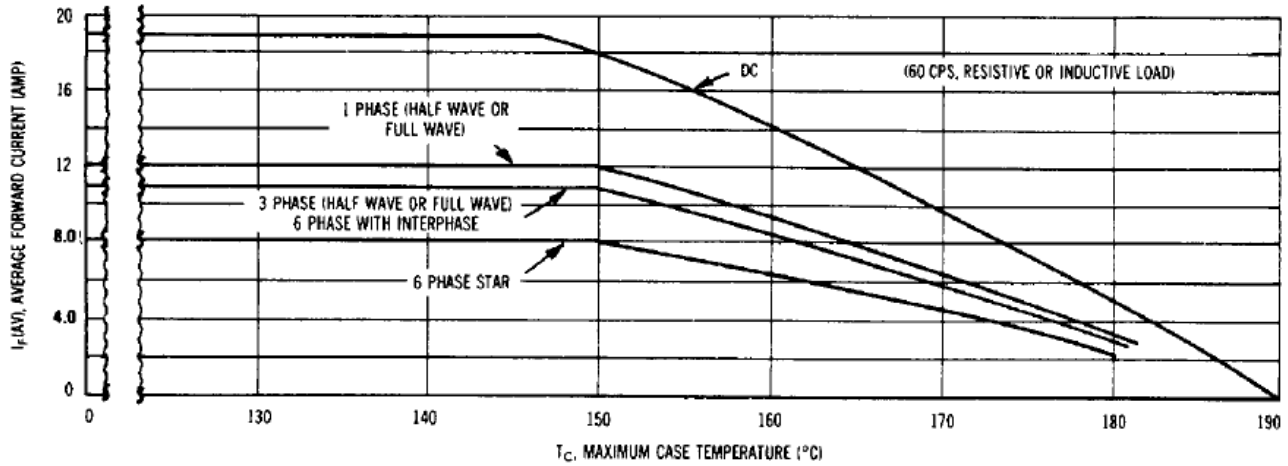


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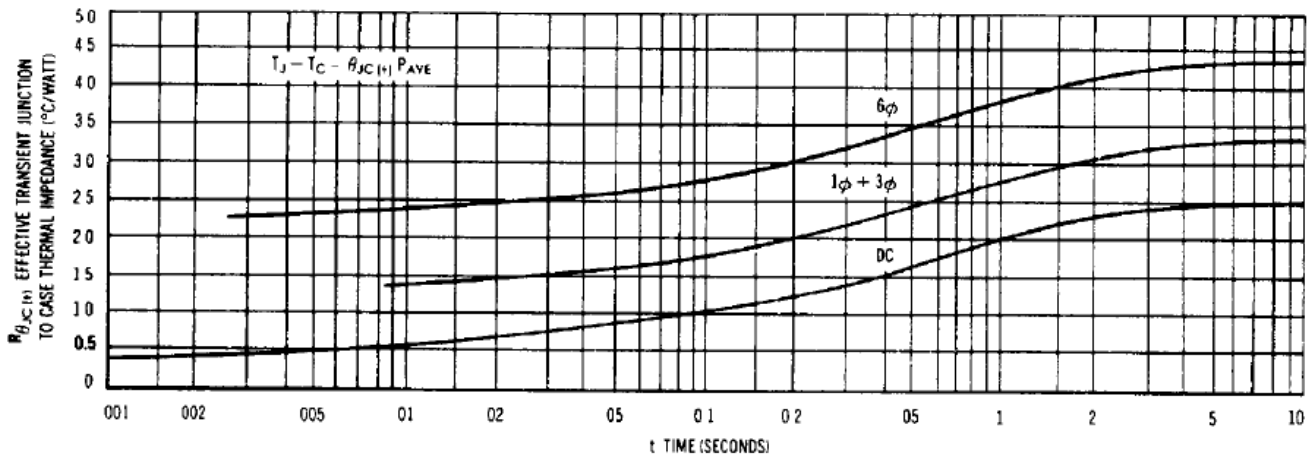
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## MAXIMUM CURRENT RATINGS



## EFFECTIVE TRANSIENT THERMAL IMPEDANCE



## CURRENT DERATING DATA

