

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 @ $T_C = 150^\circ\text{C}$									A
Peak repetitive forward current	I_{FRM}	75 @ $T_C = 150^\circ\text{C}$									A
Non-repetitive peak surge current (superimposed on rated current at rated voltage, $T_C = 150^\circ\text{C}$)	I_{FSM}	300 for ½ cycle									A
I^2t rating (non repetitive, $1\text{ms} < t < 8.3\text{ms}$)	I^2t	375									$\text{A}_{(rms)}^2\text{S}$
Operating and storage junction temperature range	T_J, T_{stg}	-65 to +190									$^\circ\text{C}$
Maximum thermal resistance Junction to case	$R_{\theta JC}$	2.5									$^\circ\text{C/W}$

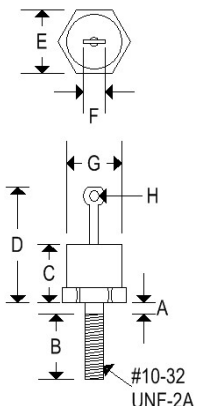
ELECTRICAL CHARACTERISTICS ($T_L = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	MR									Unit
		1120	1121	1122	1123	1124	1125	1126	1128	1130	
Full cycle average forward voltage drop ($I_O = 12\text{A}$ and rated V_R , $T_C = 150^\circ\text{C}$, half wave)	$V_{F(AV)}$	0.55									V
DC forward voltage drop ($I_F = 12\text{A}$, $T_C = 25^\circ\text{C}$)	V_F	1.0									V
Full cycle average reverse current ($I_O = 12\text{A}$ and rated V_R , $T_C = 150^\circ\text{C}$, half wave)	$I_{R(AV)}$	1.5									mA
DC reverse current (Rated V_R , $T_C = 25^\circ\text{C}$)	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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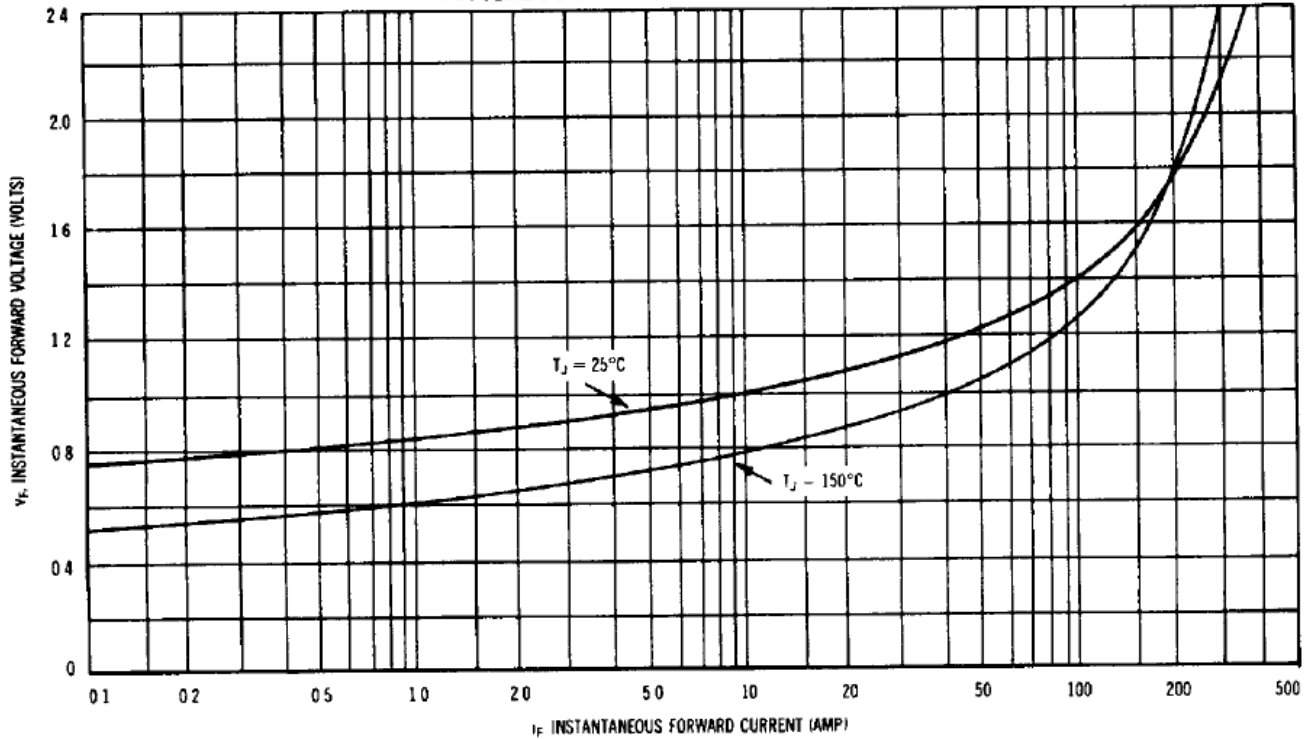
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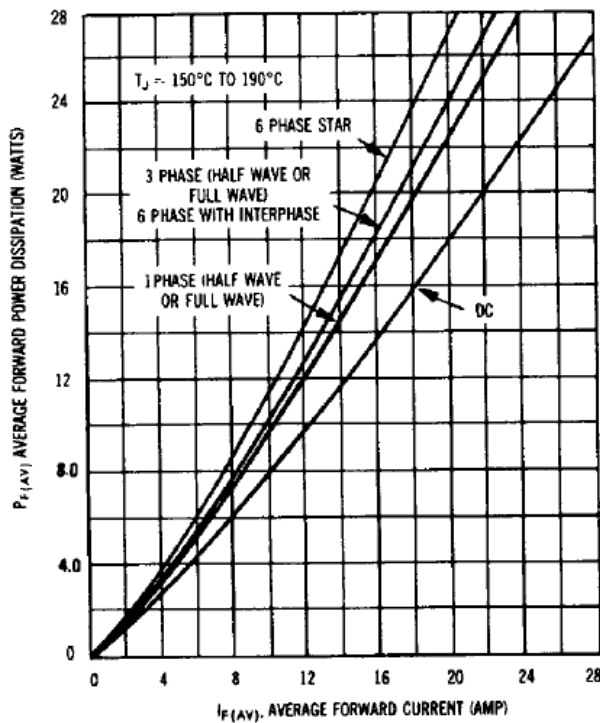
Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

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

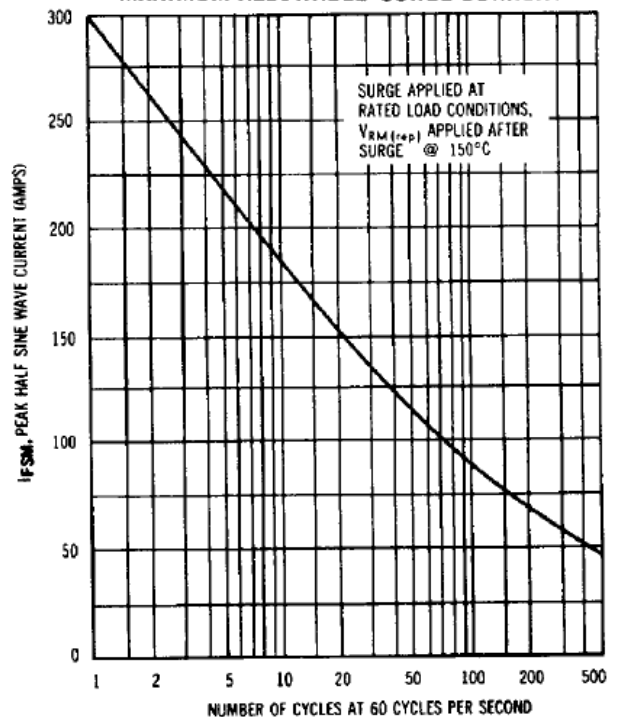
TYPICAL FORWARD CHARACTERISTICS



FORWARD POWER DISSIPATION



MAXIMUM ALLOWABLE SURGE CURRENT

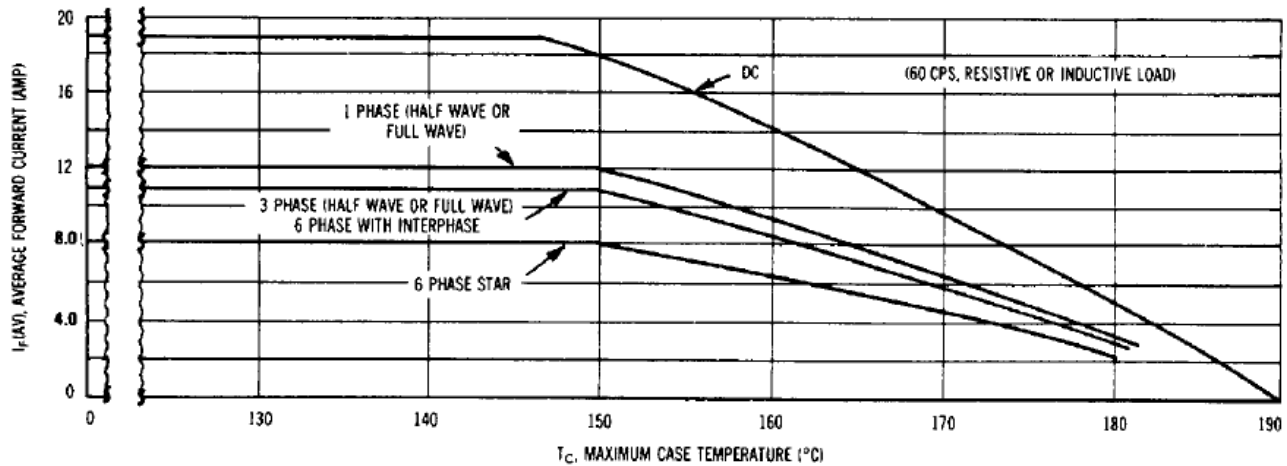


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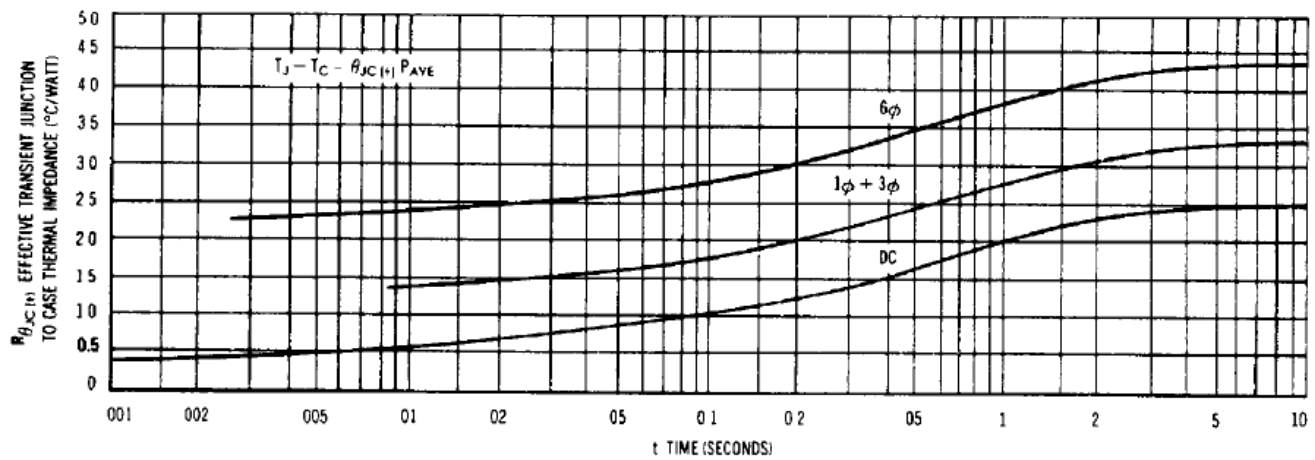
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MAXIMUM CURRENT RATINGS



EFFECTIVE TRANSIENT THERMAL IMPEDANCE



CURRENT DERATING DATA

