

DIGITRON SEMICONDUCTORS

MR2400FR-MR2410FR

24A FAST RECOVERY RECTIFIER

MAXIMUM RATINGS

Operating temperature range	-65°C to +150°C		
Storage temperature range	-65°C to +175°C		
Maximum Thermal Resistance, junction to case	0.8°C/W		
Type	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MR2400FR	50V	35V	50V
MR2401FR	100V	70V	100V
MR2402FR	200V	140V	200V
MR2404FR	400V	280V	400V
MR2406FR	600V	420V	600V
MR2408FR	800V	560V	800V
MR2410FR	1000V	700V	1000V

ELECTRICAL CHARACTERISTICS (@ 25°C unless otherwise specified)

Parameter	Symbol	Value	Test Conditions
Average Forward Current	$I_{F(AV)}$	24A	$T_C = 125^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.15V	$I_{FM} = 24.0\text{A}$ $T_A = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25 μA 1.0 μA	$T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$
Maximum Reverse Recovery Time	t_{rr}	100 to 250ns	$I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
Typical Junction Capacitance	C_J	95pF	Measured at 1.0MHz, $V_R = 4.0\text{V}$

*Pulse Test: Pulse width 300 μsec , Duty cycle 1%

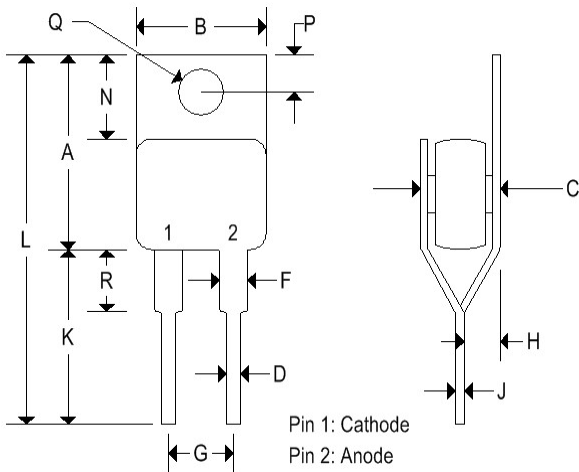
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MECHANICAL CHARACTERISTICS

Case	Digi AA
Pin out	See below
Marking	Alpha-numeric



	Digi AA			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.560	0.625	14.220	15.88
B	0.380	0.420	9.650	10.670
C	0.284	0.310	7.210	7.870
D	0.025	0.045	0.640	1.140
F	0.060	0.090	1.520	2.290
G	0.170	0.210	4.320	5.330
H	0.080	0.115	2.030	2.920
J	0.023	0.029	0.580	0.740
K	-	0.562	-	14.270
L	-	1.187	-	30.150
N	0.230	0.270	5.840	6.860
P	0.100	0.120	2.5400	3.050
Q	0.139	0.147	3.530	3.730
R	-	0.200	-	5.080

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

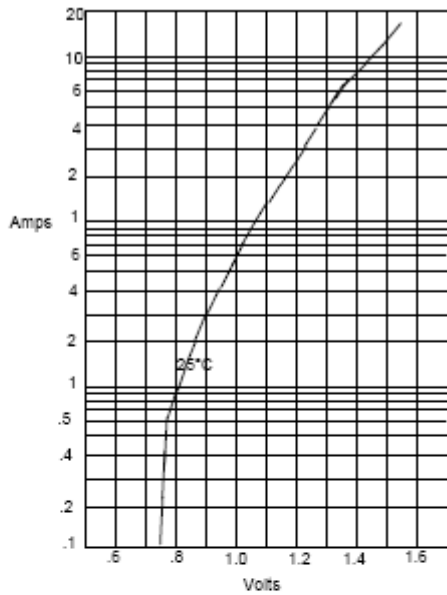
Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

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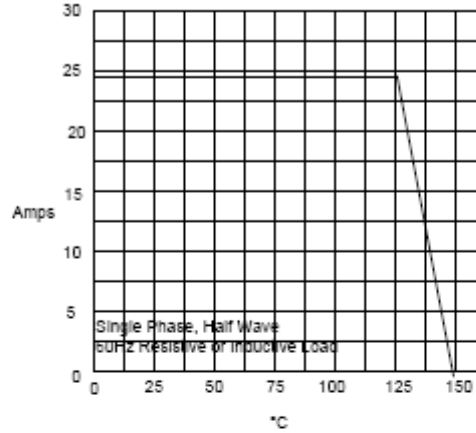
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Figure 1
Typical Forward Characteristics



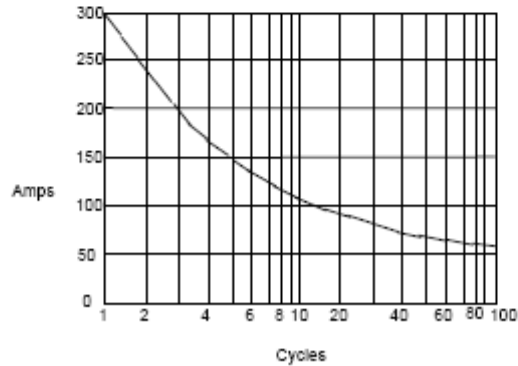
Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes versus
Ambient Temperature - °C

Figure 3
Maximum Non-Repulsive Forward Surge Current



Peak Forward Surge Current - Amperes versus
Number Of Cycles At 60Hz - Cycles

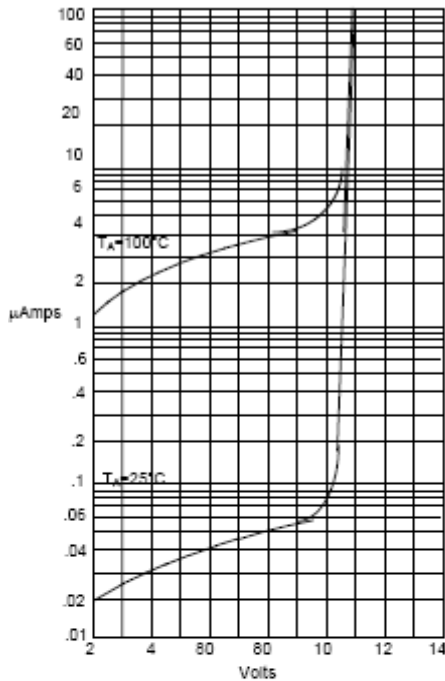
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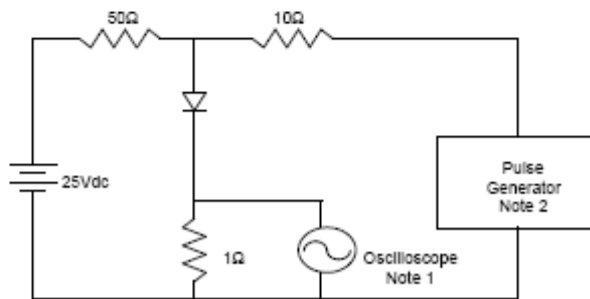
Micro Commercial Component

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes versus
Percent Of Rated Peak Reverse Voltage - Volts

Reverse Recovery Time Characteristic And Test Circuit Diagram



- Notes:
1. Rise Time = 7ns max.
Input Impedance = 1 megohm, 22pF
 2. Rise Time = 10ns max.
Source Impedance = 50 ohms
 3. Resistors are non-inductive

