DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

USD520-USD550

SCHOTTKY RECTIFIERS

FEATURES

- Available as “HR” (high reliability) screened per MIL-PRF-19500, JANTX level. Add “HR” suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding “-PBF” suffix.

MAXIMUM RATINGS

Parameter	Symbol	Value
Peak repetitive forward current @ T_C = 115°C (Rated V_R, square wave, 20 kHz, 50% duty cycle)	I_{FRM}	150A
Average forward current @ T_C = 115°C	$I_{F(AV)}$	75A
Non-repetitive peak surge current (8.3ms)	I_{FSM}	1000A
Peak reverse transient current	I_{RM}	2A
Thermal resistance, junction to case	$R_{\Theta JC}$	0.8°C/W
Storage temperature range	T_{stg}	-55° to 200°C
Operating junction temperature	$T_{J(pk)}$	175°C

ELECTRICAL CHARACTERISTICS @ 25°C unless otherwise noted

Part number	Working peak reverse voltage	Non-repetitive peak reverse voltage @ I_{RM}	Maximum forward voltage			Maximum reverse current (pulsed)*		Maximum capacitance @ V_R = 5.0V
	V_{RWM}	V_{RSM}	V_F			I_R @ V_{RWM}		
	Volts	Volts	Volts	Volts	Volts	mA	mA	pF
			@10A, 25°C	@60A, 25°C	@60A, 125°C	@T_c = 25°C	@ T_c = 125°C	
USD520	20	24	0.50	0.68	0.60	20	50	4000
USD535	35	42	0.50	0.68	0.60	20	50	4000
USD545	45	54	0.50	0.68	0.60	20	50	4000
USD550	50	60	0.50	0.68	0.60	20	75	4000

*Duty cycle = 1%.

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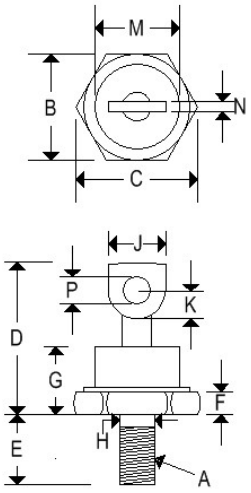
MECHANICAL CHARACTERISTICS

Case	DO-5(R)
Marking	Alpha-numeric
Normal polarity	Cathode is stud
Reverse polarity	Anode is stud (add "R" suffix)



	DO-5(R)			
	Inches		Millimeters	
	Min	Max	Min	Max
A	¼-28 UNF2A threads			
B	0.669	0.688	16.990	17.480
C	-	0.794	-	20.160
D	-	1.000	-	25.400
E	0.422	0.453	10.720	11.510
F	0115	0.200	2.920	5.080
G	-	0.450	-	11.430
H	0.220	0.249	5.580	6.320
J	0.250	0.375	6.350	9.530
K	0.156	-	3.960	-
M	-	0.667	-	16.940
N	0.030	0.080	0.760	2.030
P	0.140	0.175	3.560	4.450

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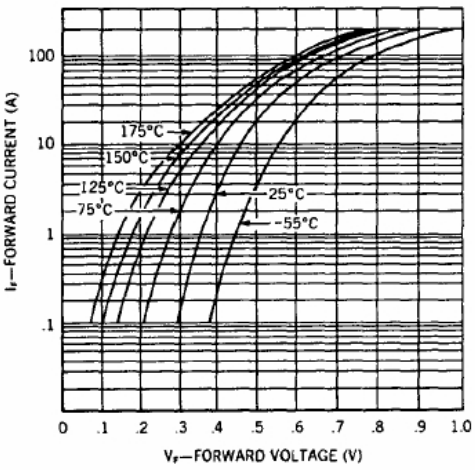
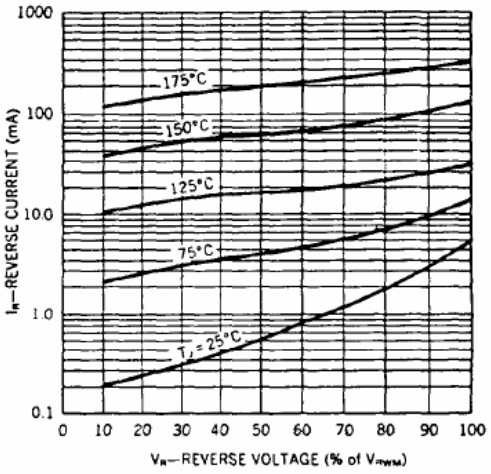
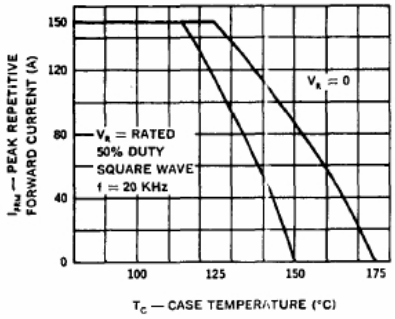
Typical Forward Current vs Forward Voltage



Typical Reverse Current vs Reverse Voltage



Maximum Current vs Case Temperature



$V_{R(MAX)}$ Rating vs Case Temperature