

DIGITRON SEMICONDUCTORS

SD51

60 AMP SCHOTTKY BARRIER RECTIFIERS

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Value	Test Conditions
Working peak reverse voltage	V _{RWM}	35V	
Repetitive peak reverse voltage	V _{RRM}	35V	
Average forward current	I _{F(AV)}	60A	T _C = 135°C, square wave, R _{eJC} = 1.0°C/W
Maximum surge current	I _{FSM}	800A	8.3ms, half-sine, T _J = 175°C
Maximum repetitive peak reverse current	I _{R(OV)}	2A	f = 1KHz, 25°C, 1μsec square wave
Maximum peak forward voltage	V _{FM}	0.60V	I _{FM} = 60A, T _J = 125°C*
Maximum peak forward voltage	V _{FM}	0.70V	I _{FM} = 60A, T _J = 25°C*
Maximum peak reverse current	I _{RM}	30mA	V _{RRM} , T _J = 125°C*
Maximum peak reverse current	I _{RM}	2mA	V _{RRM} , T _J = 25°C
Typical junction capacitance	C _J	2300pF	V _R = 5.0V, T _J = 25°C

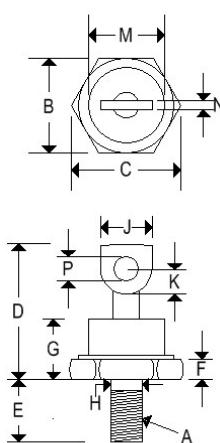
*Pulse test: pulse width 300μsec, duty cycle 2%

THERMAL CHARACTERISTICS

Characteristics	Symbol	Test Conditions
Storage temperature range	T _{stg}	-65° to 175°C
Operating junction temperature range	T _J	-65° to 175°C
Maximum thermal resistance	R _{eJC}	1.0°C/W junction to case
Typical thermal resistance (greased)	R _{eCS}	0.5°C/W case to sink
Mounting torque		25-30 inch pounds
Weight		0.54 ounce (15.3 grams) typical

MECHANICAL CHARACTERISTICS

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



A	DO-5(R)			
	Inches		Millimeters	
	Min	Max	Min	Max
A	1/4-28 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	0.115	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

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

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

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60 AMP SCHOTTKY BARRIER DIODES

Figure 1
Typical Forward Characteristics

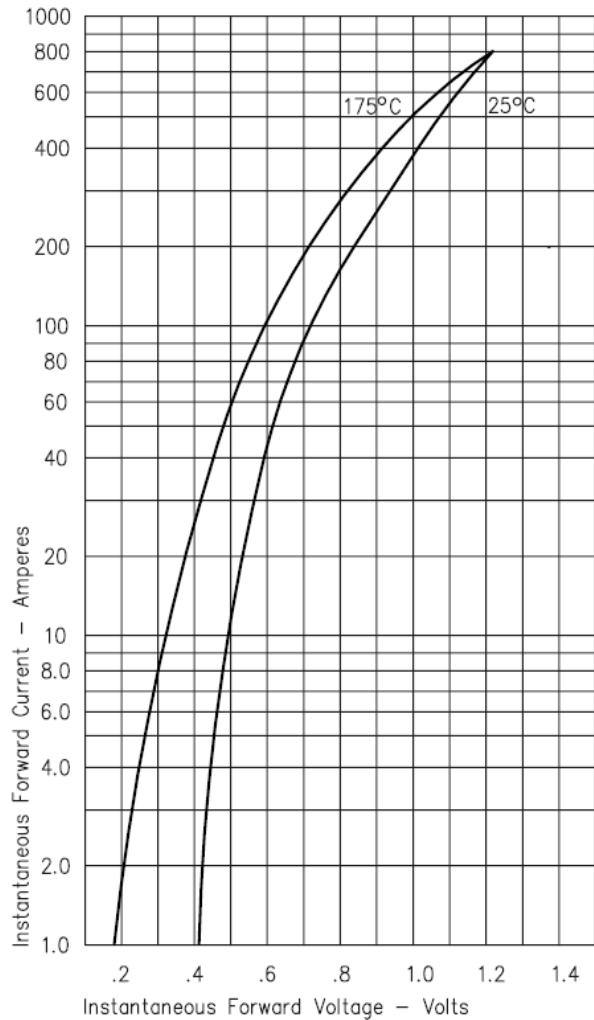


Figure 2
Typical Reverse Characteristics

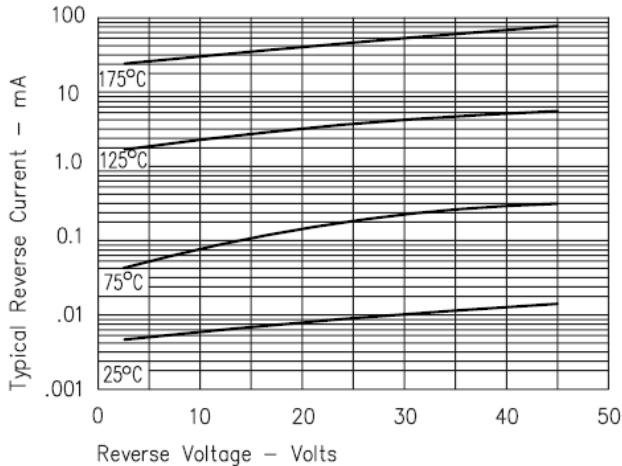


Figure 3
Typical Junction Capacitance

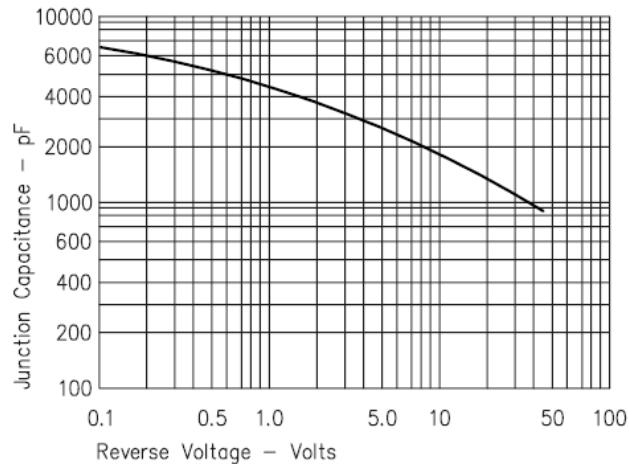


Figure 4
Forward Current Derating

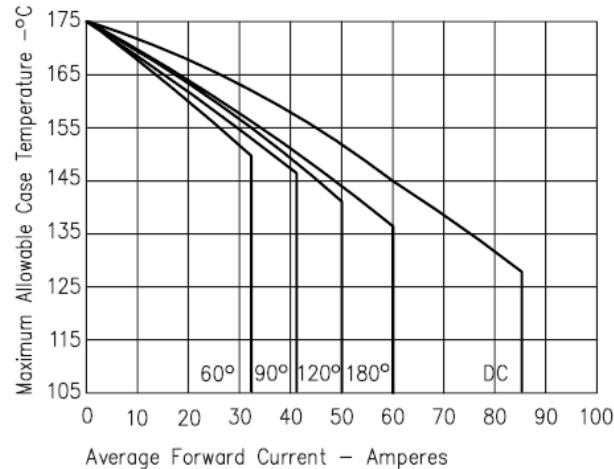


Figure 5
Maximum Forward Power Dissipation

