DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

MBR3035WT-MBR3045WT

30 A 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

Rating	Symbol	MBR		Unit
		3035WT	3045WT	
Peak repetitive reverse voltage **Working peak reverse voltage** **DC blocking voltage**	V_{RRM} V_{RWM} V_R	35	45	V
Average rectified forward current (Rated V_R)	$I_{F(AV)}$	30 @ T_C = 105°C		A
Peak repetitive forward current (Rated V_R, square wave, 20 kHz)	I_{FRM}	30		A
Peak repetitive reverse surge current (2.0µs, 1.0 kHz)	I_{RRM}	2		A
Non-repetitive peak surge current (surge applied at rated load conditions, halfwave, single phase, 60Hz)	I_{FSM}	200		A
Operating junction temperature range	T_J	-65 to +150		°C
Storage junction temperature range	T_{stg}	-65 to +175		°C
Peak surge junction temperature (forward current applied)	$T_{J(pk)}$	175		°C
Voltage rate of change (Rated V_R)	dv/dt	10		V/ns
Maximum thermal resistance Junction to case Junction to ambient	 $R_{\Theta JC}$ $R_{\Theta JA}$	 1.4 40		°C/W

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	MBR		Unit
		3035WT	3045WT	
Maximum instantaneous forward voltage [1] (I_F = 20A, T_C = 125°C) (I_F = 30A, T_C = 125°C) (I_F = 30A, T_C = 25°C)	V_F	 0.6 0.72 0.76		V
Maximum instantaneous reverse current [1] (Rated dc voltage, T_C = 125°C) (Rated dc voltage, T_C = 25°C)	I_R	 100 1.0		mA

DIGITRON™ Semiconductors

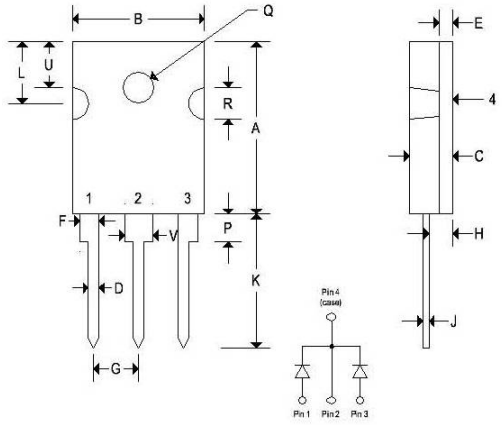
High-reliability discrete products and engineering services since 1977

MBR3035WT-MBR3045WT

30 A SCHOTTKY RECTIFIERS

MECHANICAL CHARACTERISTICS

Case	TO-247
Marking	Alpha-numeric
Pin out	See below



	TO-247			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.803	0.823	20.400	20.900
B	0.608	0.628	15.440	15.950
C	0.185	0.205	4.700	5.210
D	0.043	0.051	1.090	1.300
E	0.059	0.064	1.500	1.630
F	0.071	0.086	1.800	2.180
G	0.215 BSC		5.450 BSC	
J	0.019	0.027	0.480	0.680
K	0.613	0.633	15.570	16.080
L	0.286	0.295	7.260	7.500
P	0.122	0.133	3.100	3.380
Q	0.138	0.145	3.500	3.700
R	0.130	0.150	3.300	3.800
U	0.209 BSC		5.300 BSC	
V	0.120	0.134	3.050	3.400

DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

MBR3035WT-MBR3045WT

30 A SCHOTTKY RECTIFIERS

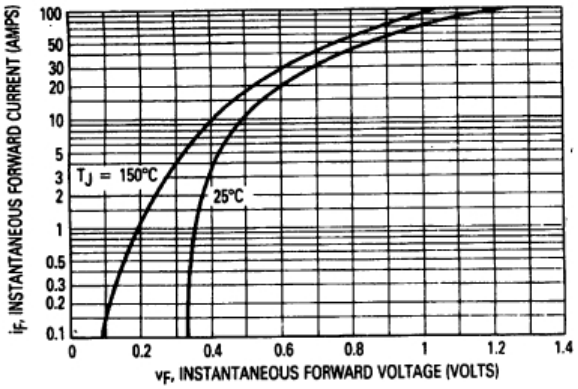


Figure 1. Typical Forward Voltage

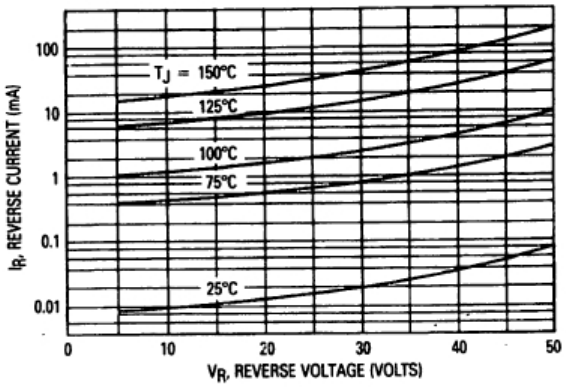


Figure 2. Typical Reverse Current

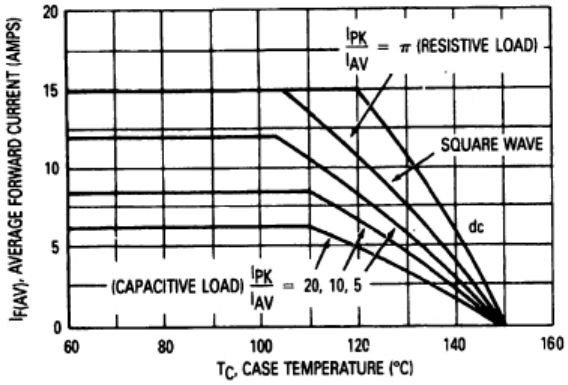


Figure 3. Current Derating (Per Leg)

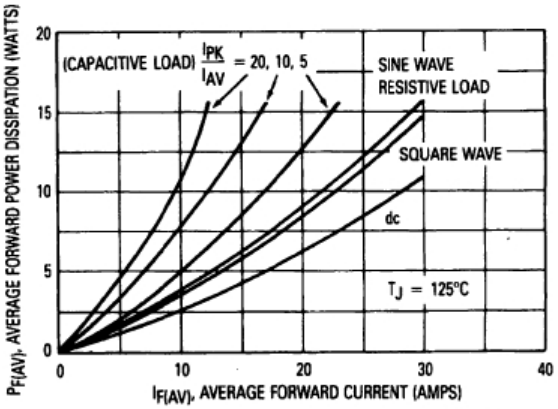


Figure 4. Forward Power Dissipation (Per Leg)

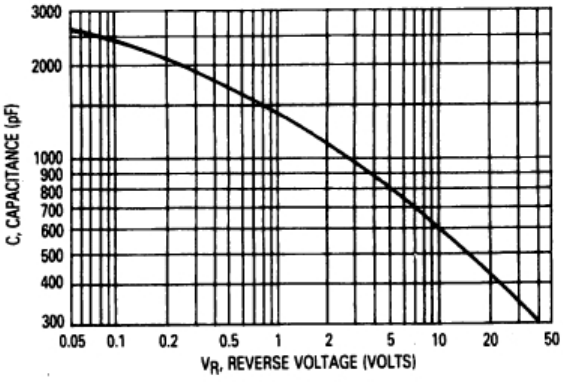


Figure 5. Capacitance

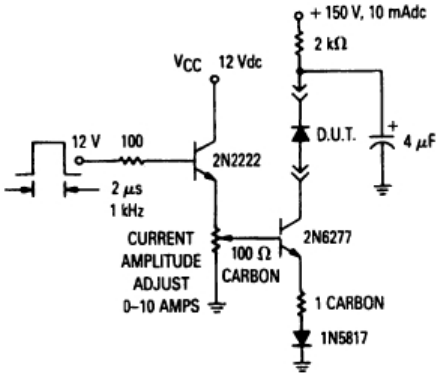


Figure 6. Test Circuit For Repetitive Reverse Current