

MBR3035PT-MBR3045PT

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
		3035PT	3045PT	
Peak repetitive reverse voltage	V_{RRM}	35	45	V
Working peak reverse voltage	V_{RWM}			
DC blocking voltage	V_R			
Average rectified forward current (Rated V_R)	$I_{F(AV)}$	30 @ $T_C = 105^{\circ}\text{C}$		A
Peak repetitive forward current (Rated V_R , square wave, 20 kHz)	I_{FRM}	30		A
Peak repetitive reverse surge current (2.0 μs , 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		$^{\circ}\text{C}$
Storage junction temperature range	T_{stg}	-65 to +175		$^{\circ}\text{C}$
Peak surge junction temperature (forward current applied)	$T_{J(pk)}$	175		$^{\circ}\text{C}$
Voltage rate of change (Rated V_R)	dv/dt	1000		$\text{V}/\mu\text{s}$
Maximum thermal resistance				
Junction to case	$R_{\Theta JC}$	1.4		$^{\circ}\text{C}/\text{W}$
Junction to ambient	$R_{\Theta JA}$	40		

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

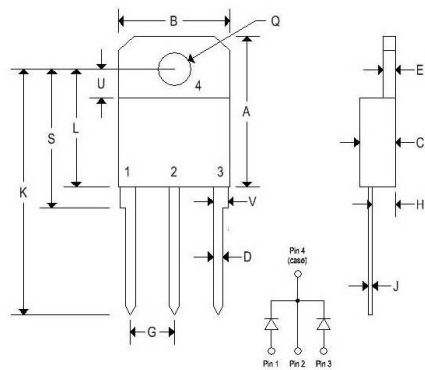
Parameter	Symbol	MBR		Unit
		3035PT	3045PT	
Maximum instantaneous forward voltage ⁽¹⁾ ($I_F = 20\text{A}$, $T_C = 125^\circ\text{C}$) ($I_F = 30\text{A}$, $T_C = 125^\circ\text{C}$) ($I_F = 30\text{A}$, $T_C = 25^\circ\text{C}$)	V_F	0.6 0.72 0.76		V
Maximum instantaneous reverse current ⁽¹⁾ (Rated dc voltage, $T_C = 125^\circ\text{C}$) (Rated dc voltage, $T_C = 25^\circ\text{C}$)	I_R	100 1.0		mA

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MECHANICAL CHARACTERISTICS

Case	TO-218AC
Marking	Alpha-numeric
Pin out	See below



	TO-218AC			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.749	0.771	19.000	19.600
B	0.551	0.570	14.000	14.500
C	0.165	0.185	4.200	4.700
D	0.040	0.051	1.000	1.300
E	0.058	0.064	1.450	1.650
G	0.206	0.225	5.210	5.720
H	0.103	0.118	2.600	3.000
J	0.016	0.023	0.400	0.600
K	1.123	1.259	28.500	32.000
L	0.579	0.602	14.700	15.300
Q	0.158	0.167	4.000	4.250
S	0.689	0.712	17.500	18.100
U	0.134	0.149	3.400	3.800
V	0.060	0.078	1.500	2.000

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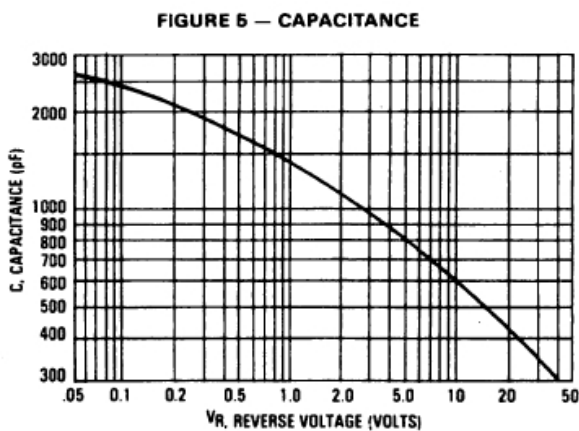
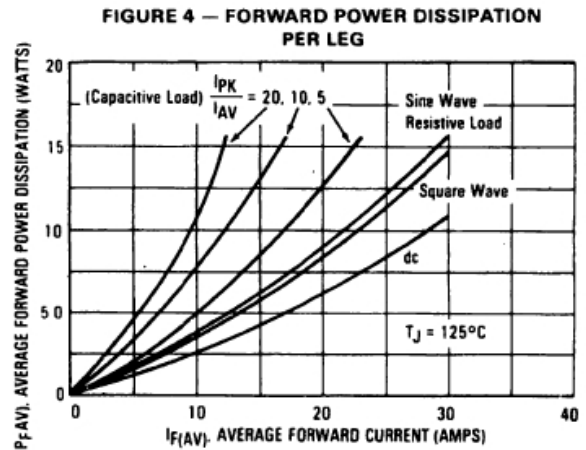
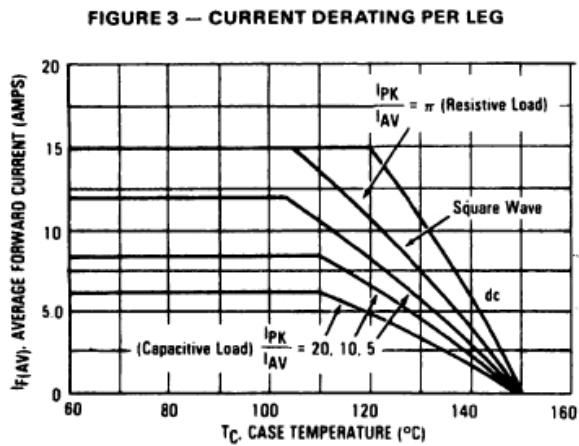
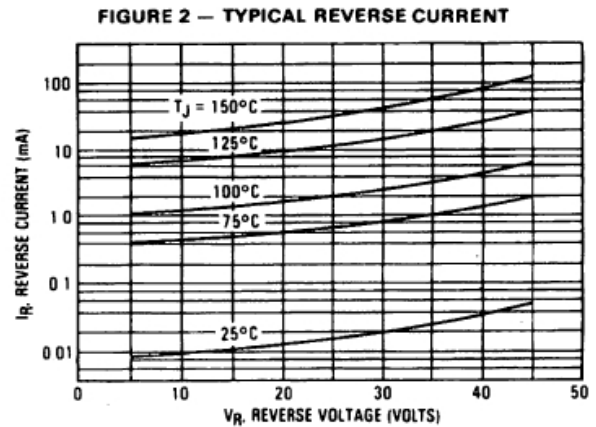
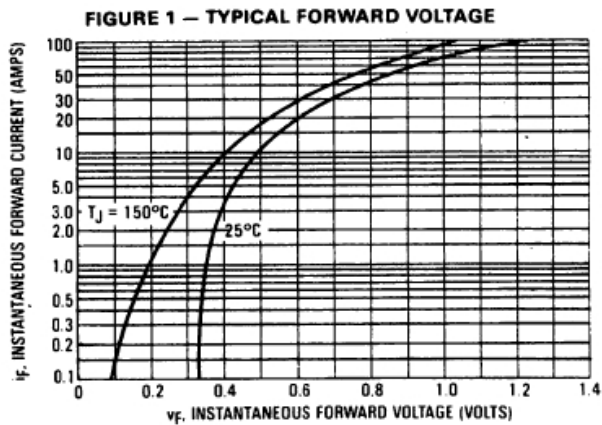


FIGURE 6 — TEST CIRCUIT FOR REPETITIVE REVERSE CURRENT

