sapcon®

MBRF1030C Thru MBRF1060C

Switchmode
Full Plastic Dual Schottky Barrier Power Rectifiers

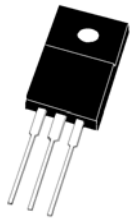
Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

Features

* Low Forward Voltage.
* Low Switching noise.
* High Current Capacity
* Guarantee Reverse Avalanche.
* Guard-Ring for Stress Protection.
* Low Power Loss & High efficiency.
* 175℃ Operating Junction Temperature
* Low Stored Charge Majority Carrier Conduction.
* Plastic Material used Carries Underwriters Laboratory

SCHOTTKY BARRIER RECTIFIERS

10 AMPERES
30-60 VOLTS



ITO-220AB

Mecnanical Data

* Case :JEDEC ITO-220AB molded plastic body
* Termals:Plated lead,solderable per MIL-STD-750, Method 2026
* Polarity:As marked
* Mounting Torqure: 5 in-lbs. max
* Weight:1.7 g approx.
* High temperature soldering guaranteed 260℃/10 seconds

* *In compliance with EU RoHs 2002/95/EC directives*

MAXIMUM RATINGS

Characteristic	Symbol	MBRF10						Unit
		30C	35C	40C	45C	50C	60C	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	35	40	45	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	25	28	32	35	42	V
Average Rectifier Forward Current Total Device (Rated V_R),T_C=100℃	$I_{F(AV)}$	5.0 10						A
Peak Repetitive Forward Current (Rate V_R, Square Wave, 20kHz)	I_{FM}	10						A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I_{FSM}	100						A
Operating and Storage Junction Temperature Range	T_J , T_{STG}	-65 to +175						℃

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	MBRF10						Unit
		30C	35C	40C	45C	50C	60C	
Maximum Instantaneous Forward Voltage (I_F =5 Amp T_C = 25℃) (I_F =5 Amp T_C = 125℃)	V_F	0.65 0.56				0.75 0.65		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	0.01 20						mA
Typical Thermal Resistance junction to case	$R_{\theta jc}$	2.8						℃/w

FIG-1 FORWARD CURRENT DERATING CURVE

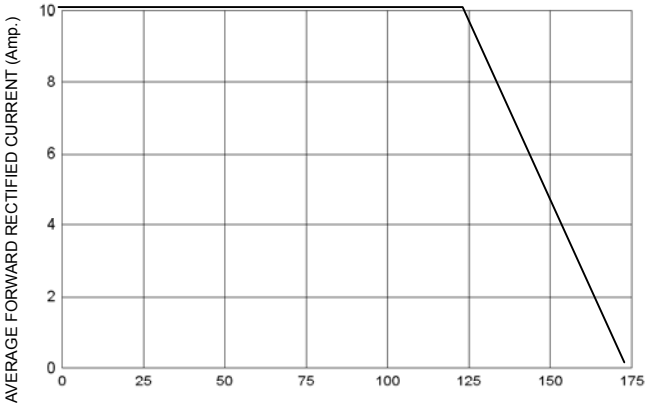


FIG-2 TYPICAL FORWARD CHARACTERISITICS

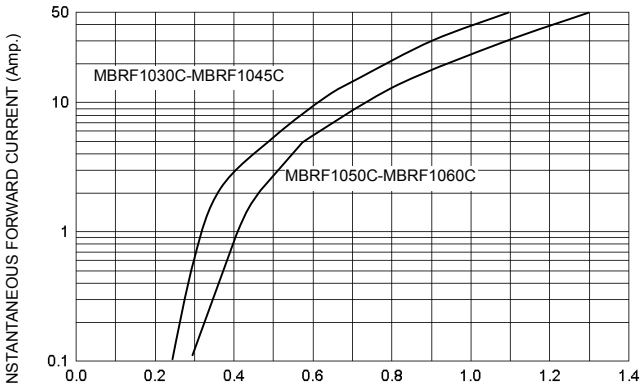


FIG-3 TYPICAL REVERSE CHARACTERISTICS

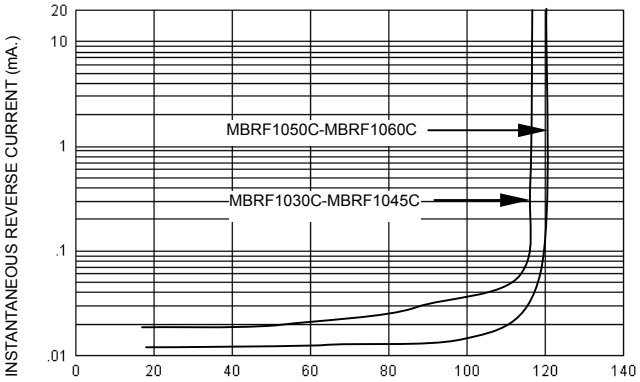


FIG-4 TYPICAL JUNCTION CAPACITANCE

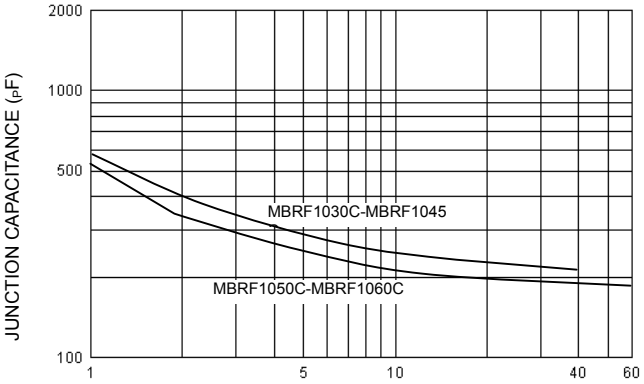


FIG-5 PEAK FORWARD SURGE CURRENT