sapcon®

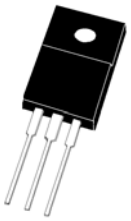
MBRF30200CL

Switchmode
Full Plastic Dual Schottky Barrier Power Rectifiers

SCHOTTKY BARRIER RECTIFIERS

30 AMPERES
200 VOLTS

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. The properietary barrier technology allows for reliable operation up to 175℃ junction temperature. Typical application are in switching Mode Power Supplies such as adaptators, DC/DC convertes,free-wheeling and polarity protection diodes.



ITO-220AB

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 Flammability Classification 94V-O

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

MAXIMUM RATINGS

Characteristic	Symbol	MBRF30200CL	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	V
Average Rectifier Forward Current (per diode) Total Device (Rated V_R), T_C=125℃	$I_{F(AV)}$	15 30	A
Peak Repetitive Forward Current (Rate V_R, Square Wave, 20kHz)	I_{FM}	30	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I_{FSM}	250	A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-65 to +175	℃

THERMAL RESISTANCES

Typical Thermal Resistance junction to case (per device)	$R_{\theta jc}$	3.2	℃/w

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ	Max.	Unit
Maximum Instantaneous Forward Voltage (per diode) (I_F =0.1 Amp T_C = 25℃) (I_F =7.5 Amp T_C = 25℃) (I_F =15 Amp T_C = 25℃)	V_F	 -- -- --	 0.32 0.85 0.95	 0.38 0.88 0.98	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	 -- --	 0.08 15	 0.1 30	mA

FIG-1 FORWARD CURRENT DERATING CURVE

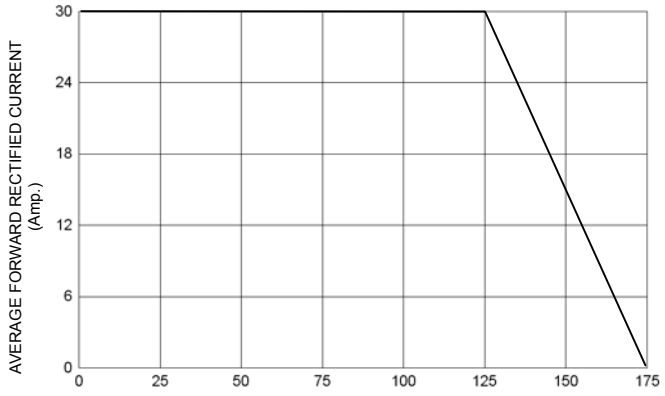


FIG-2 TYPICAL FORWARD CHARACTERISITICS

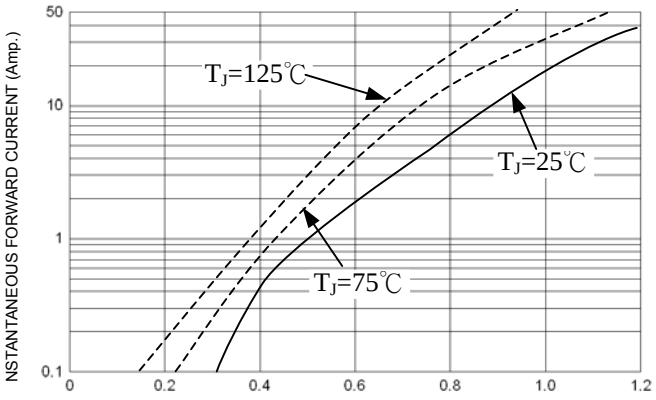


FIG-3 TYPICAL REVERSE CHARACTERISTICS

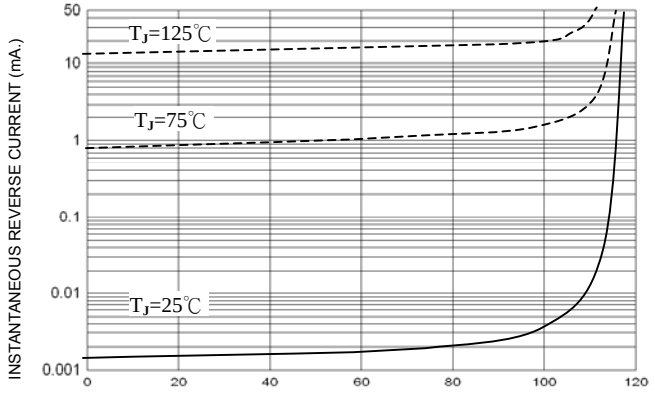


FIG-4 TYPICAL JUNCTION CAPACITANCE

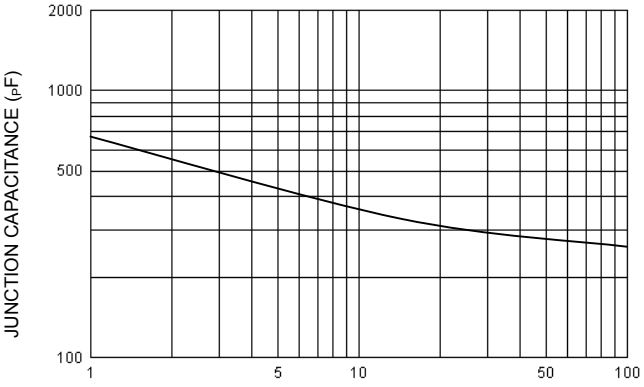


FIG-5 PEAK FORWARD SURGE CURRENT