



SMBRP2060

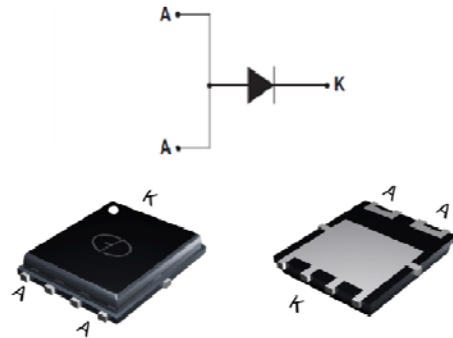
Schottky Barrier Rectifier

Reverse Voltage 60 Volts Forward Current 20 Amperes

Features

Ultra Low $V_f=0.43V$ at $I_F=10A$ (25°C)/ $V_f=0.54 V$ at $I_F=20A$ (25°C)

- Thin Package:1.0mm
- Low forward voltage drop, low power losses
- High efficiency operation
- Halogen Free Plastic package has underwriters Laboratory Flammability Classification 94V-0



Package: POWER QFN5x6

Mechanical Data

- Case: Epoxy, Molded
- Weight: 0.1grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 3000 units per reel

Maximum Ratings & Electrical Characteristics

($T_A=25^\circ C$ unless otherwise noted)

PARAMETER	TEST CONDITIONS		SYMBOL	SMBRP2060	UNIT
Maximum repetitive peak reverse voltage			V_{RRM}	60	V
Working peak reverse voltage			V_{RWM}	60	V
Maximum DC blocking voltage			V_{DC}	60	V
Maximum average forward rectified current at $T_c=105^\circ C$ total device per diode			$I_F(AV)$	20	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			I_{FSM}	200	A
Peak repetitive reverse current per leg at $t_p=2.0\mu s$, 1KHz			I_{RRM}	2.0	A
Operating junction temperature range			T_J	-55 to +150	$^\circ C$
Storage temperature range			T_{STG}	-55 to +150	$^\circ C$
Maximum instantaneous forward voltage per leg	$I_F=10A$ $I_F=10A$ $I_F=20A$ $I_F=20A$	$T_C=25^\circ C$ $T_C=125^\circ C$ $T_C=25^\circ C$ $T_C=125^\circ C$	V_F	0.48(0.43 TYP) 0.40 0.60(0.54 TYP) 0.51	V
Maximum reverse current per leg at working peak Reverse voltage		$T_J=25^\circ C$ $T_J=100^\circ C$	I_R	500 50	μA mA
Thermal Characteristics $T_A=25^\circ C$ unless otherwise noted					
Symbol	Parameter		TYP (POWER QFN 5x6)		Unit
R θ JC	Thermal Resistance, Junction to Case per Leg		2.5		$^\circ C / W$
R θ JA	Thermal Resistance, Junction to Ambient per Leg		50		$^\circ C / W$

Note: Pulse test:300us pulse width, duty cycle=2%



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Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

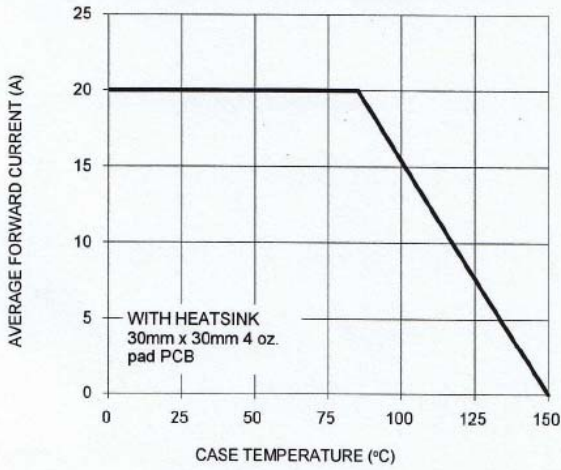
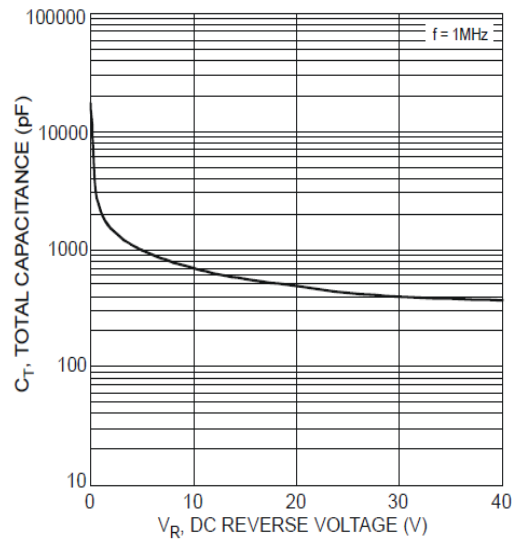
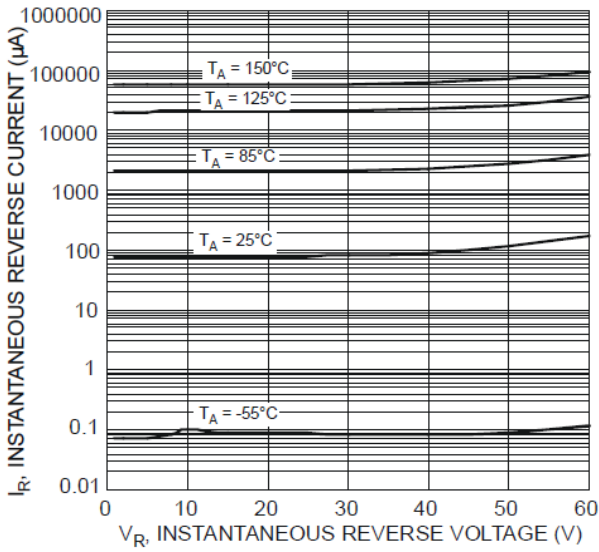
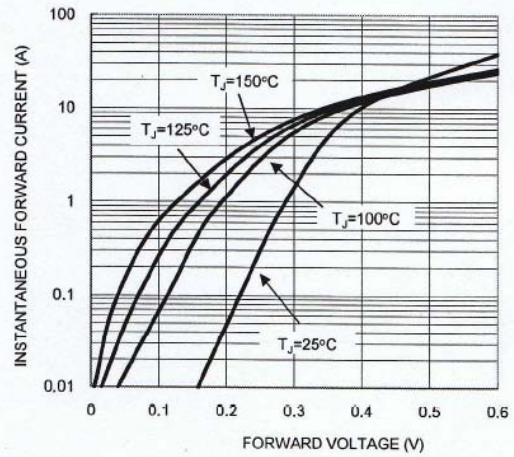


FIG. 2 TYPICAL FORWARD CHARACTERISTICS





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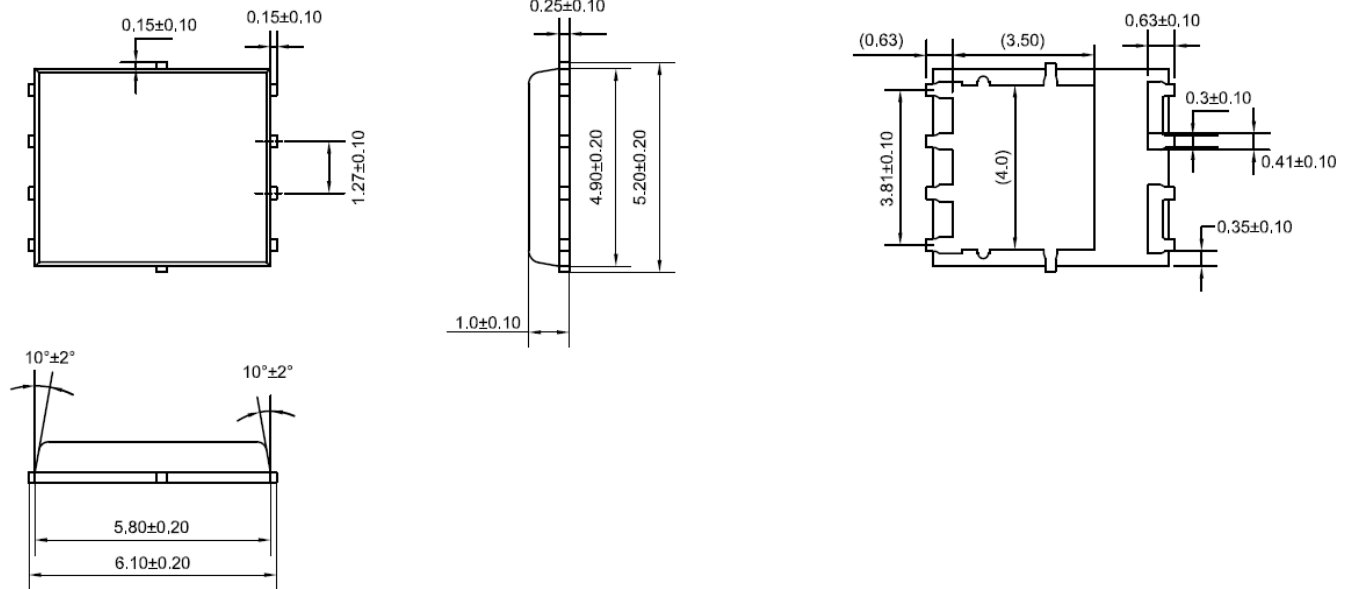
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Package Outline Dimensions

Unit: millimeters

POWER QFN 5x6





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