



SMBRP2060

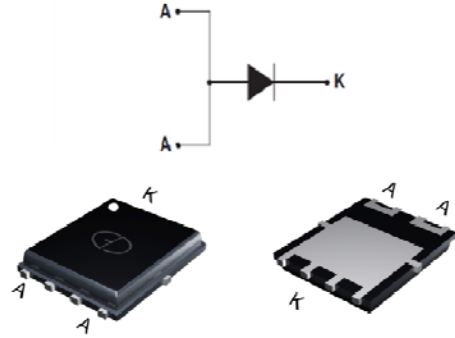
Schottky Barrier Rectifier

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°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 =2.0us ,1KHz				I _{RRM}	2.0	A
Operating junction temperature range				T _J	—55 to+150	°C
Storage temperature range				T _{STG}	—55 to+150	°C
Maximum instantaneous forward voltage per leg		I _F =10A I _F =10A I _F =20A I _F =20A	T _C =25°C T _C =125°C T _C =25°C T _C =125°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°C T _J =100°C	I _R	500 50	uA mA
Thermal Characteristics T _A =25°C unless otherwise noted						
Symbol	Parameter	TYP (POWER QFN 5x6)				Unit
RθJC	Thermal Resistance, Junction to Case per Leg	2.5				°C /W
RθJA	Thermal Resistance, Junction to Ambient per Leg	50				°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

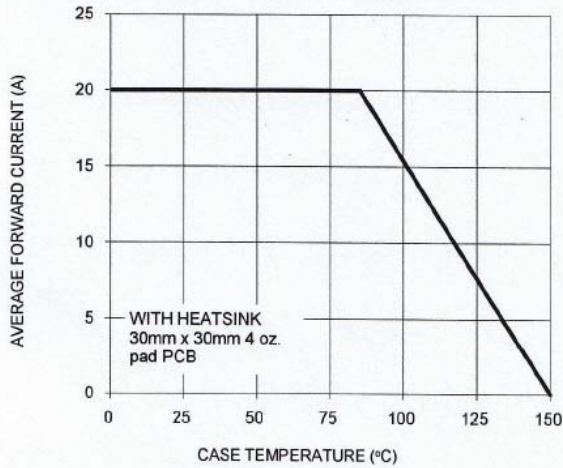
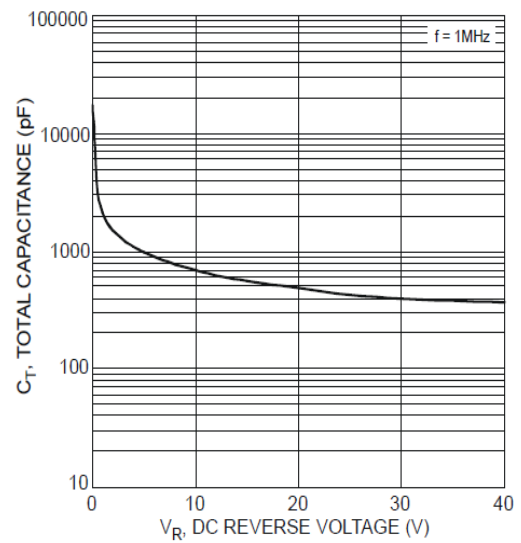
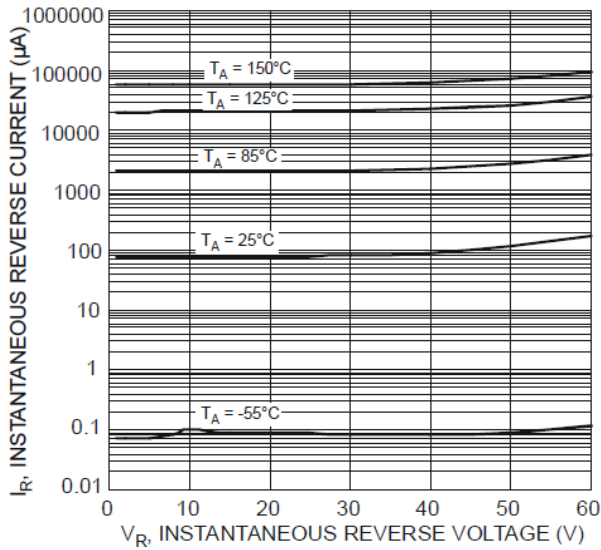
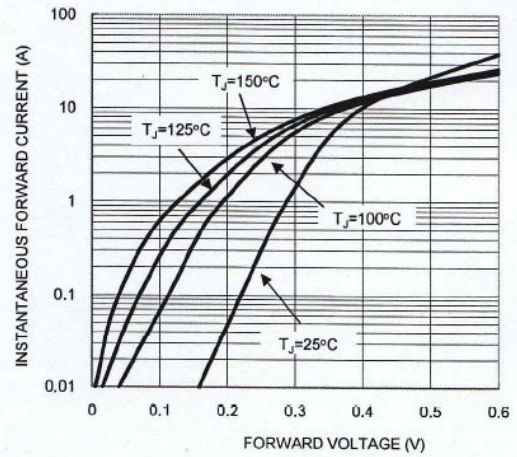


FIG. 2 TYPICAL FORWARD CHARACTERISTICS





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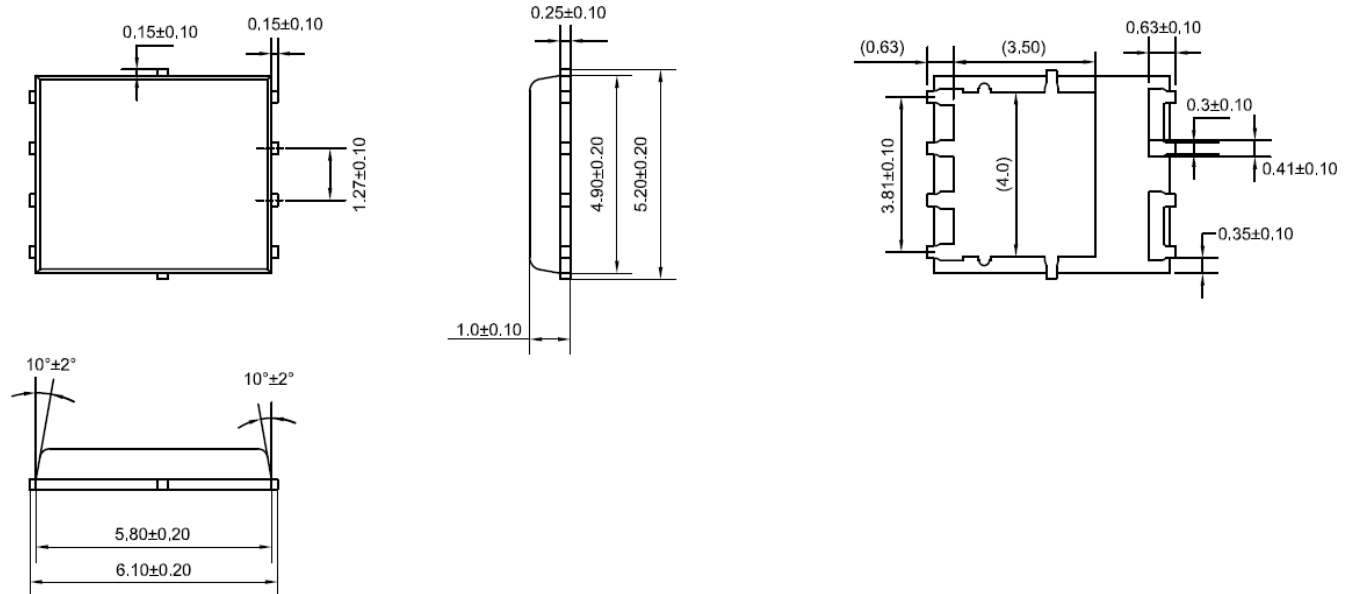
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Package Outline Dimensions

Unit: millimeters

POWER QFN 5x6





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