



SMBRP845

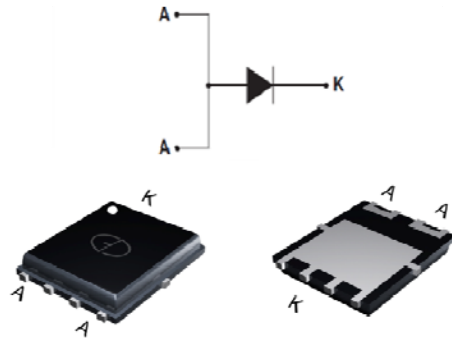
Schottky Barrier Rectifier

Reverse Voltage 45 Volts Forward Current 8 Amperes

Features

Ultra Low Vf=0.38V(TYP) at IF=3A (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

(TA=25°C unless otherwise noted)

PARAMETER	TEST CONDITIONS		SYMBOL	SMBRP845	UNIT
Maximum repetitive peak reverse voltage			V _{RRM}	45	V
Working peak reverse voltage			V _{RWM}	45	V
Maximum DC blocking voltage			V _{DC}	45	V
Maximum average forward rectified current at T _c =105°C total device per diode			I _{F(AV)}	8	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			I _{FSM}	120	A
Peak repetitive reverse current per leg at t _p =2.0us ,1KHz			I _{RRM}	1.0	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 =8A I _F =8A	T _C =25°C T _C =125°C	V _F	0.52(0.47 TYP) 0.43	V
Maximum reverse current per leg at working peak Reverse voltage	T _J =25°C T _J =100°C		I _R	200 20	uA mA
Thermal Characteristics TA=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)

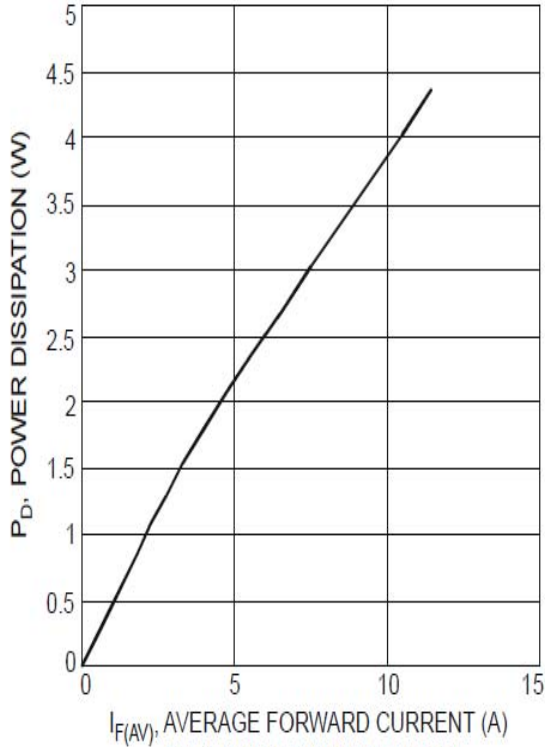


Fig. 1 Forward Power Dissipation

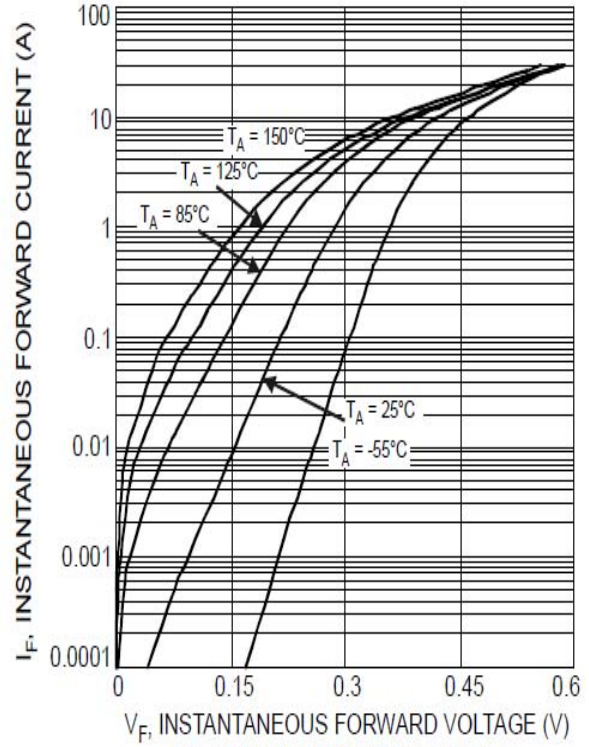


Fig. 2 Typical Forward Characteristics

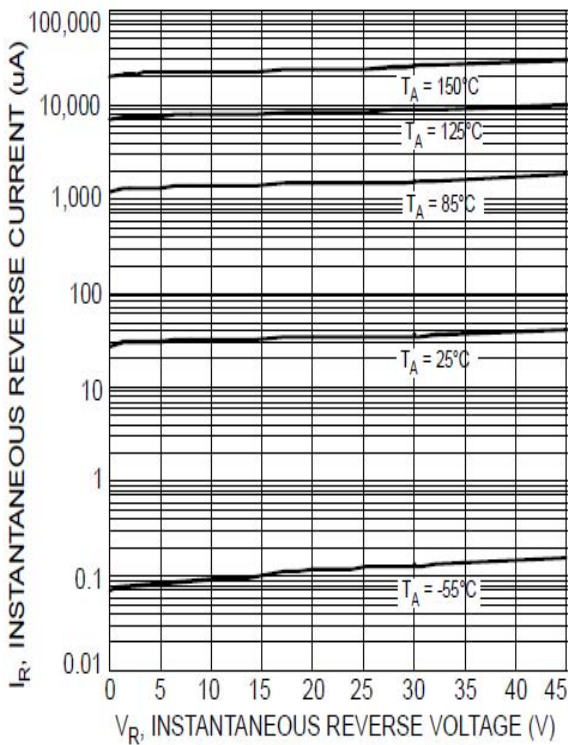


Fig. 3 Typical Reverse Characteristics

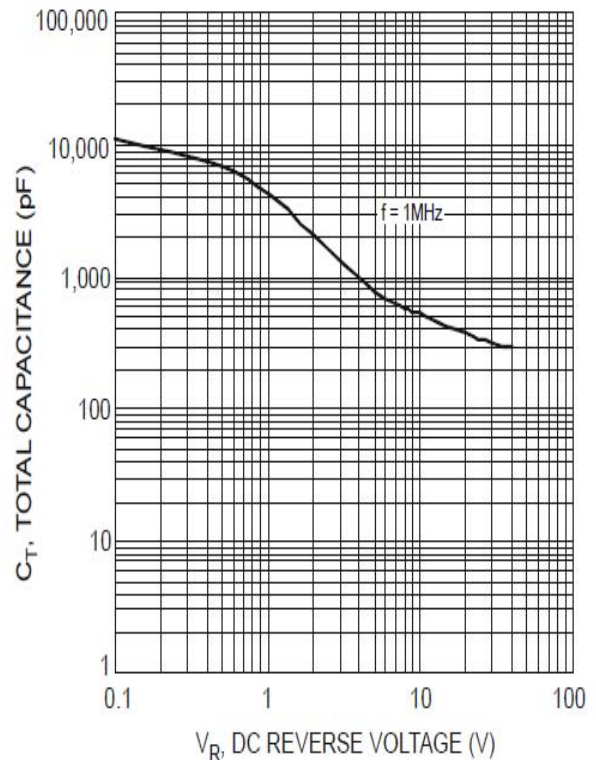


Fig. 4 Total Capacitance vs. Reverse Voltage



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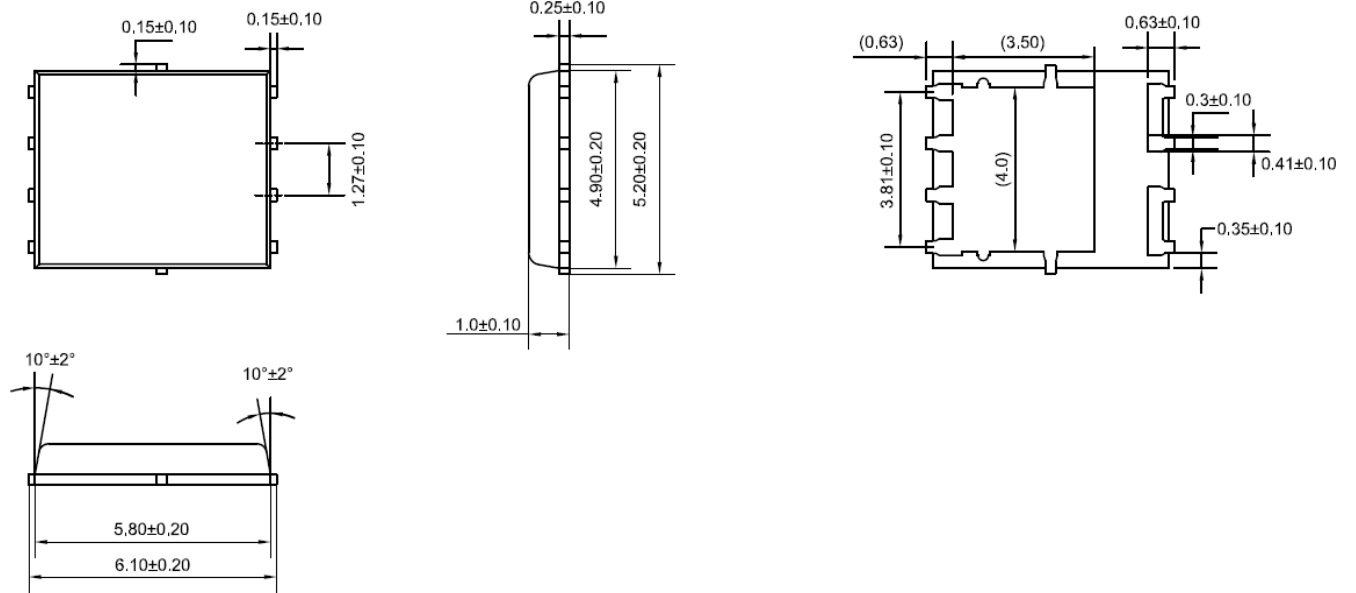
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Package Outline Dimensions

Unit: millimeters

POWER QFN 5x6





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