

Product Specification

GOODARK Type (POWER QFN Diode)

MBRP1545

Construction : Schottky Barrier Rectifier

Application : For General Purpose

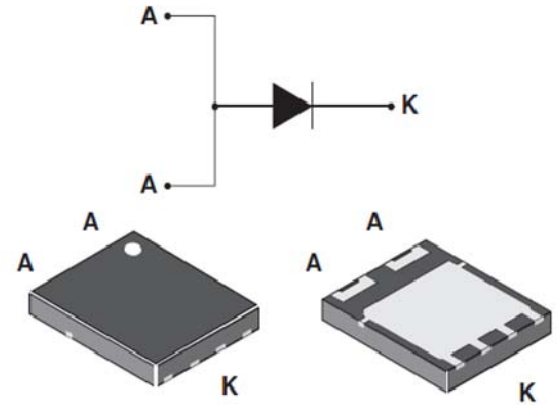
(Manufacturer) :

Suzhou Goodark Electronics Co.,Ltd

Prepared on July. 20th, 2012

Prepared: R & D Department

Approva: QRA Department



SCHOTTKY BARRIER RECTIFIER

15 AMPERES

45 VOLTS

0.45V (10A)/ Ultra-Low Vf Schottky

0.49V(15A)/Ultra- Low Vf Schottky

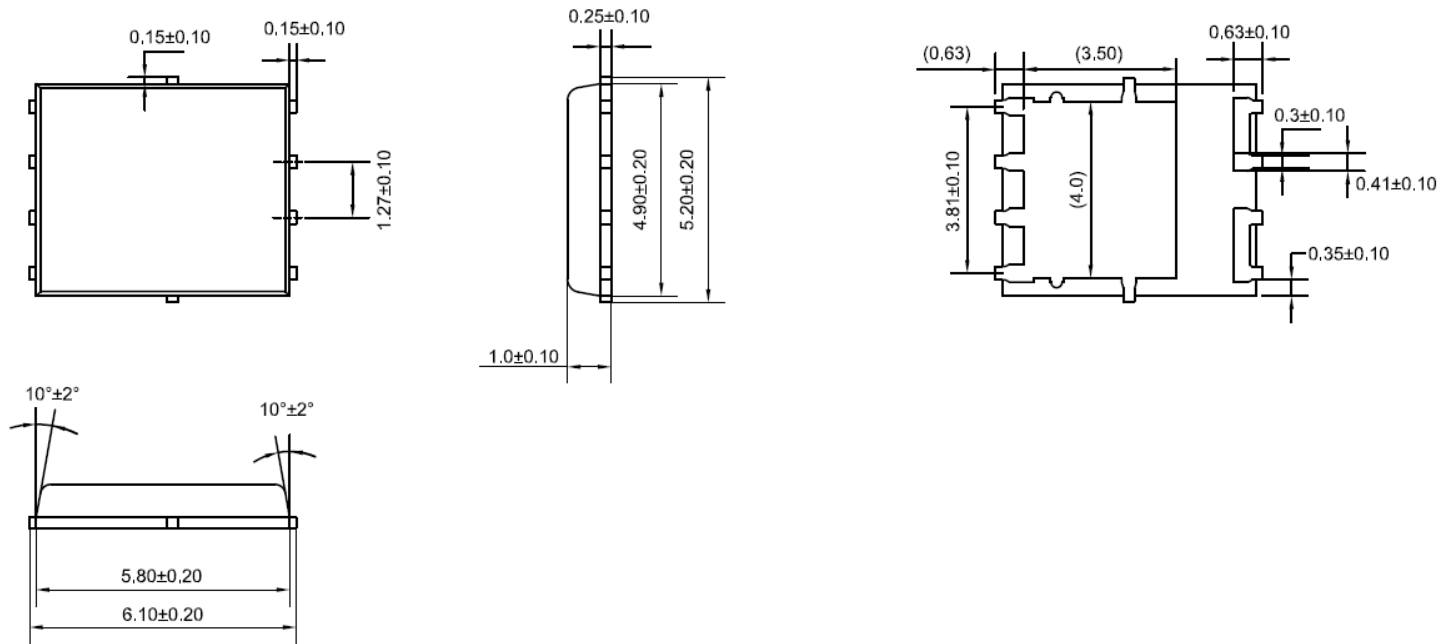
Thin Package: 1.0mm

Halogen Free Package

CONTENTS

1. Package Outline
2. Marking
3. Features& Mechanical Characteristics
4. Maximum Ratings and Electrical Characteristics
5. Rating and characteristic Curves
6. Packing Specification PACKAGING SPECIFICATION
7. Description of Box Label

1. Package Outline (POWER QFN5X6)



2.MARKING



1. Part Name : MBRP1545

2. Logo Mark: 

3. Polarity: 



3.Features& Mechanical Characteristics

Features

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- For surface mounted application
- Metal of silicon rectifier, majority carrier conduction
- Low forward voltage, high efficiency
- Guarding for over voltage protection
- For use in low voltage, high frequency inverters,
- Free wheeling, and polarity protection applications

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 0.1grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Shipped tape reel packing 3000/reel

4.Maximum Ratings and Electrical Characteristics

MAXIMUM RATINGS and ELECTRICAL CHARACTERISTICS(TC=25°C unless otherwise moted)						
PARAMETER	TEST CONDITIONS		SYMBOL	MBRP1545	UNIT	
Maximum repetitive peak reverse voltage			VRRM	45	V	
Working peak reverse voltage			VRWM	45	V	
Maximum DC blocking voltage			VDC	45	V	
Maximum average forward rectified current at Tc=105°C total device per diode			IF(AV)	15	A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			IFSM	200	A	
Peak repetitive reverse current per leg at tp=2.0us , 1KHz			IRRM	1.0	A	
Voltage rate of change (rated VR)			DV/dt	10000	V/us	
Operating junction temperature range			TJ	-55 to+150	°C	
Storage temperature range			TSTG	-55 to+150	°C	
Maximum instantaneous forward voltage per leg	IF=10A IF=10A IF=15A IF=15A	TC=25°C TC=125°C TC=25°C TC=125°C	VF	0.45 0.38 0.49 0.41	V	
Maximum reverse current per leg at working peak Reverse voltage			TJ=25°C TJ=100°C	IR	200 15	uA mA

Thermal Characteristics Ta=25°C unless otherwise noted

Symbol	Parameter	Max	Unit
RθJC	Thermal Resistance, Junction to Case per Leg	2.0	°C /W
RθJA	Thermal Resistance, Junction to Ambient per Leg	50	°C /W

Note:

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

5. Rating and Characteristic Curves

($T_c=25^\circ\text{C}$ Unless otherwise noted)

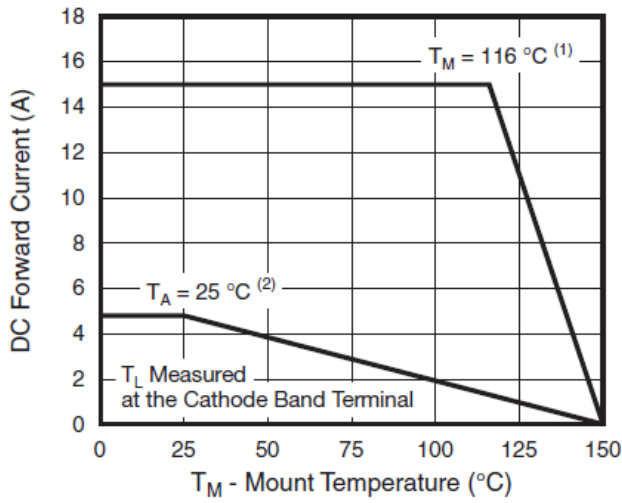


Fig. 1 - Forward Current Derating Curve

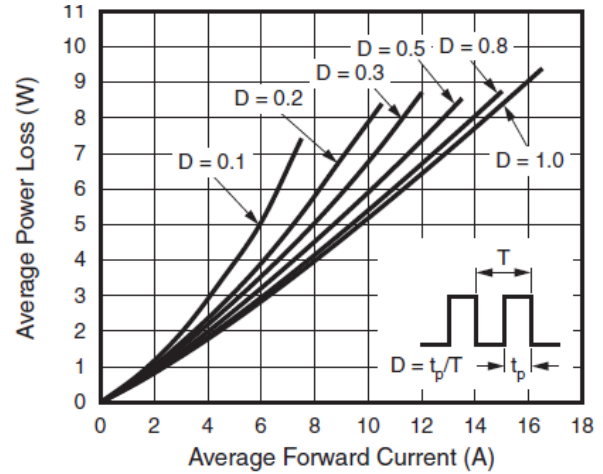


Fig. 2 - Forward Power Loss Characteristics Per Diode

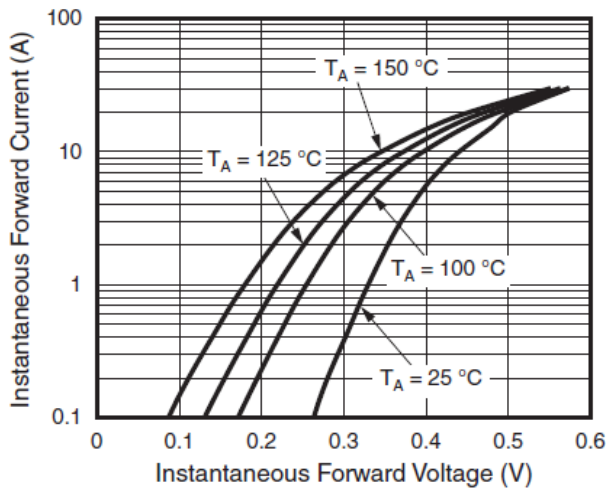


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

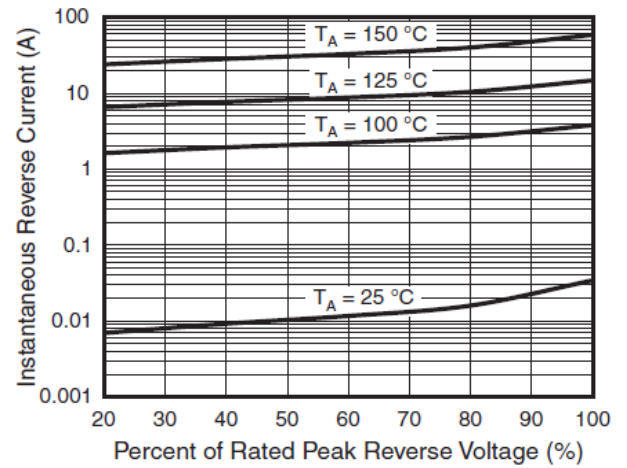


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

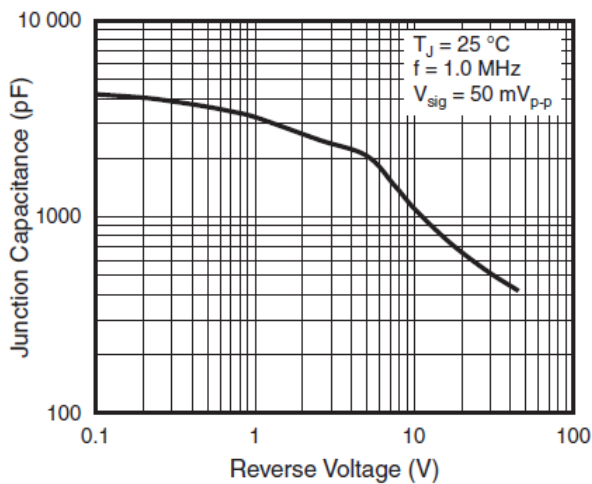


Fig. 5 - Typical Junction Capacitance

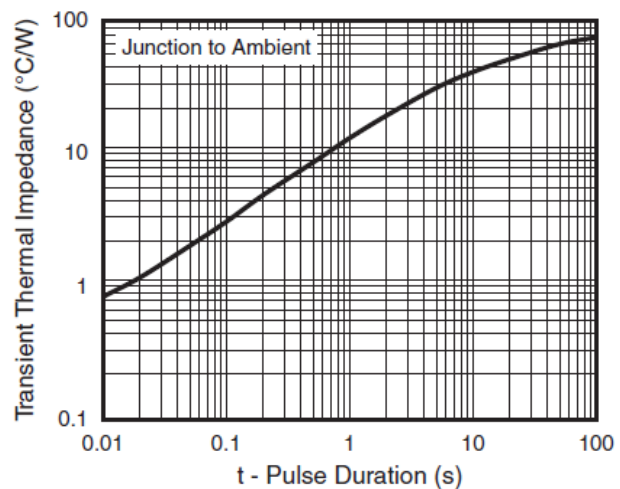


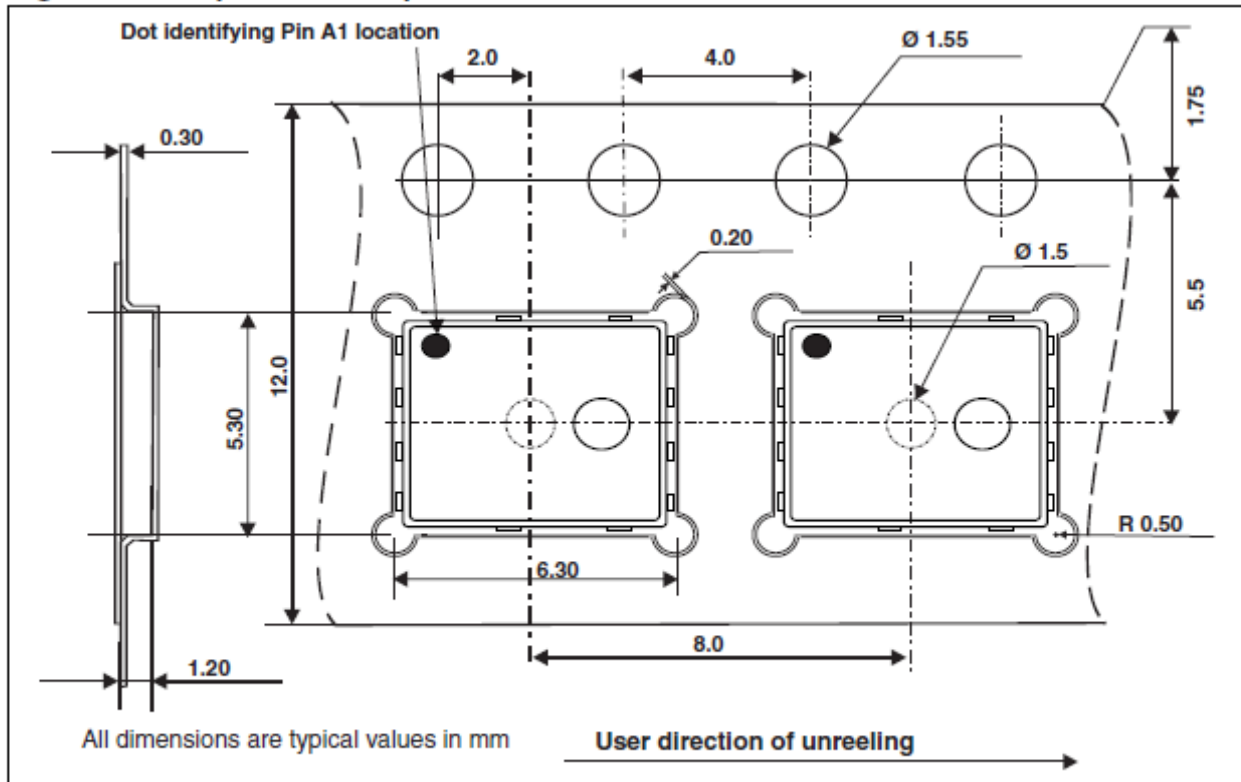
Fig. 6 - Typical Transient Thermal Impedance Per Diode

6. Packing Specification

Tape&reel packing



Packing size:3000 /reel(13' reel)

Figure 12. Tape and reel specifications





7. DESCRIPTION of BOX LABEL

	<p>TYPE: Q'TY: P/O NO: LOT NO:</p>
<p>1) Inner Box Label</p>	<p>2) Inner Box Label</p>
	<p>TYPE: Q'TY: P/O NO:</p>
<p>3) Outer Box Label</p>	<p>4) Outer Box Label</p>