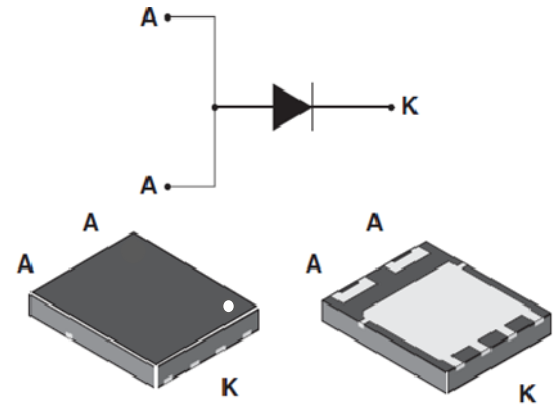


Product Specification

Ultra Low Vf=0.40V at IF=10A (25° C)

GOODARK Type (POWER QFN Diode)
SMBRP1545

Construction : Schottky Barrier Rectifier
Application : For General Purpose
(Manufacturer) :
Suzhou Goodark Electronics Co.,Ltd
Prepared on Aug. 18th, 2012
Prepared: R & D Department
Approval: QRA Department



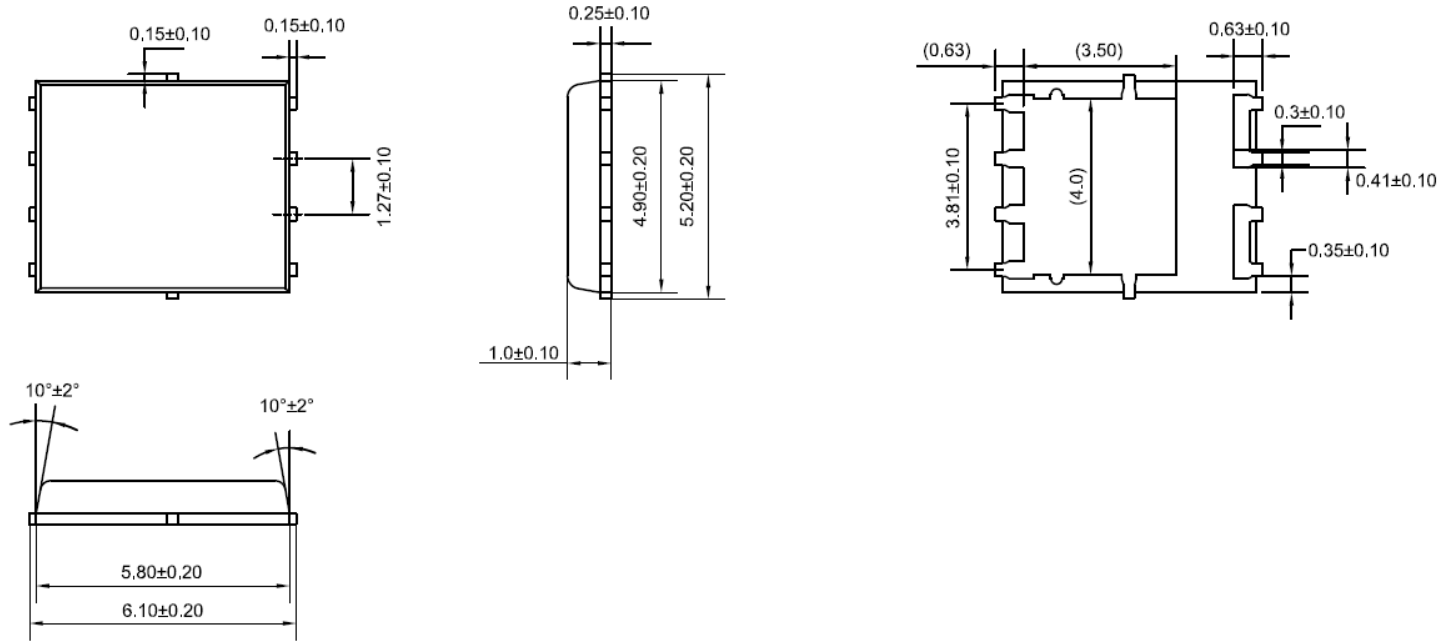
SCHOTTKY BARRIER RECTIFIER
15 AMPERES
45 VOLTS

0.30V (1A Type)/ Ultra- Low Vf Schottky
0.40V (10A Type)/ Ultra-Low Vf Schottky
0.43V(15A Type)/ Ultra-Low Vf Schottky
Thin Package: 1.0mm
Halogen Free Package

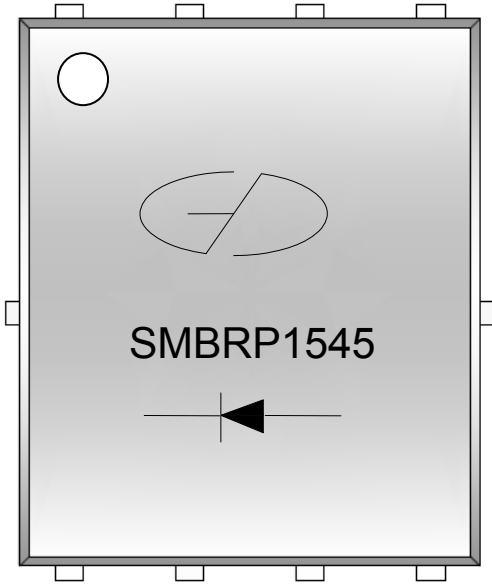
CONTENTS

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 : SMBRP1545

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	SMBRP1545	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=1A IF=10A IF=15A	TC=25°C TC=25°C TC=25°C	VF	0.30(Type) 0.43/(0.40Type) 0.47	V
Maximum reverse current per leg at working peak Reverse voltage	TJ=25°C		IR	500	uA

Thermal Characteristics Ta=25°C unless otherwise noted

Symbol	Parameter	Type Value	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:

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

5. Rating and Characteristic Curves

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

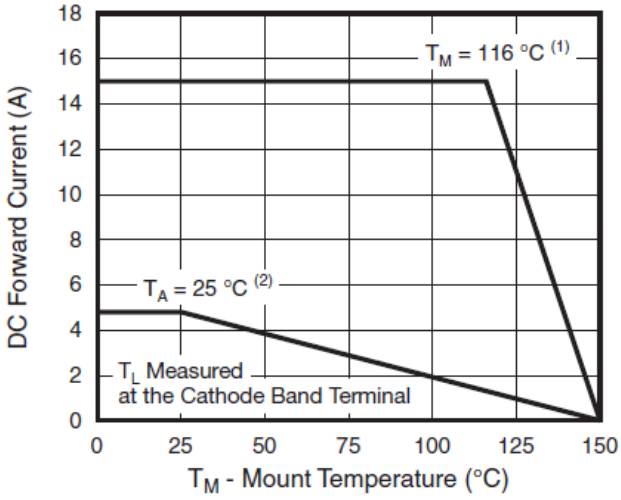


Fig. 1 - Forward Current Derating Curve

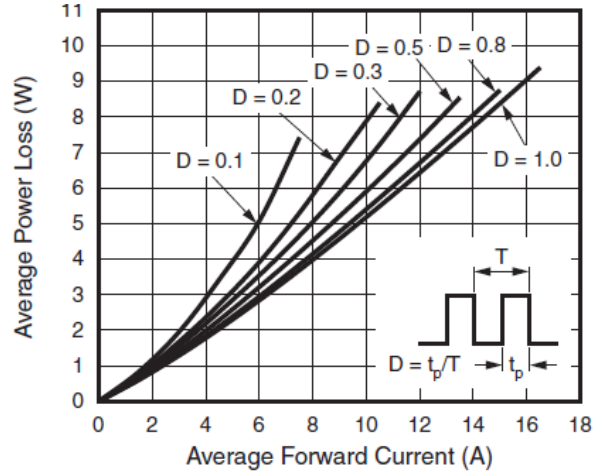


Fig. 2 - Forward Power Loss Characteristics Per Diode

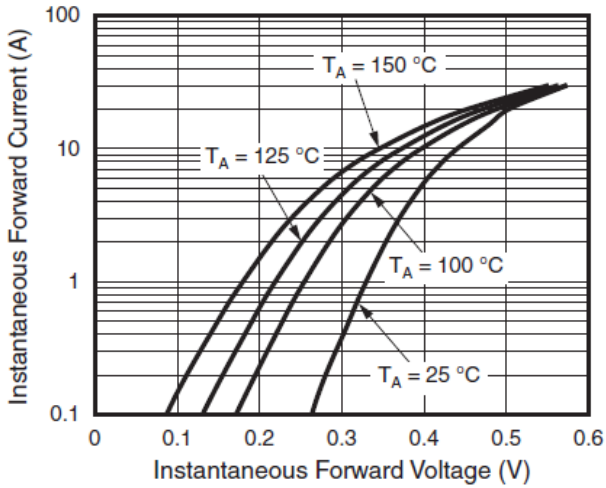


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

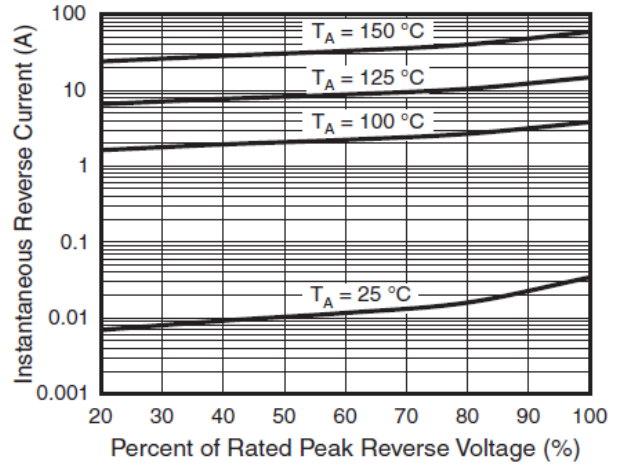


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

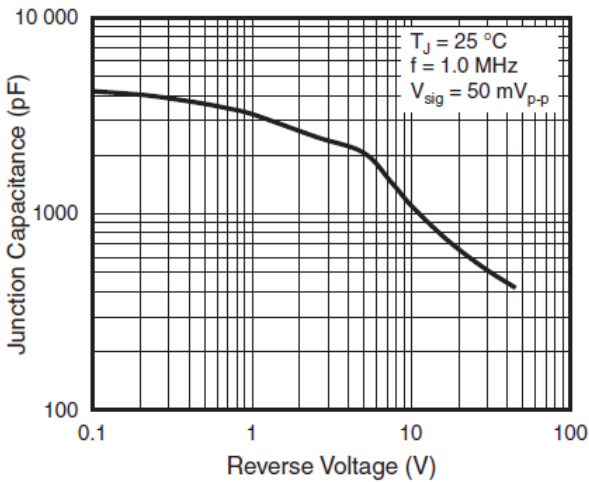


Fig. 5 - Typical Junction Capacitance

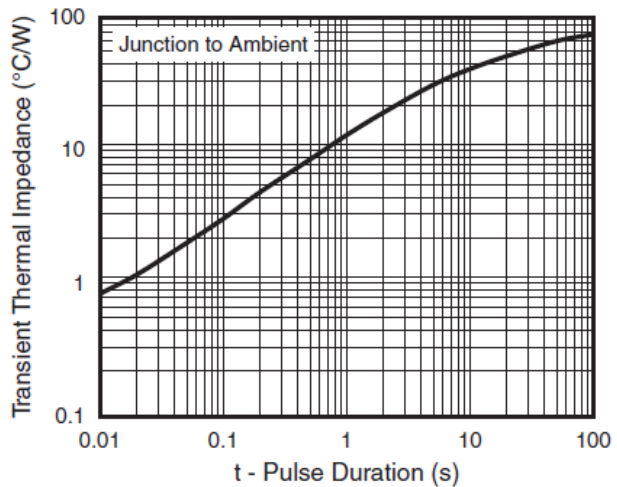


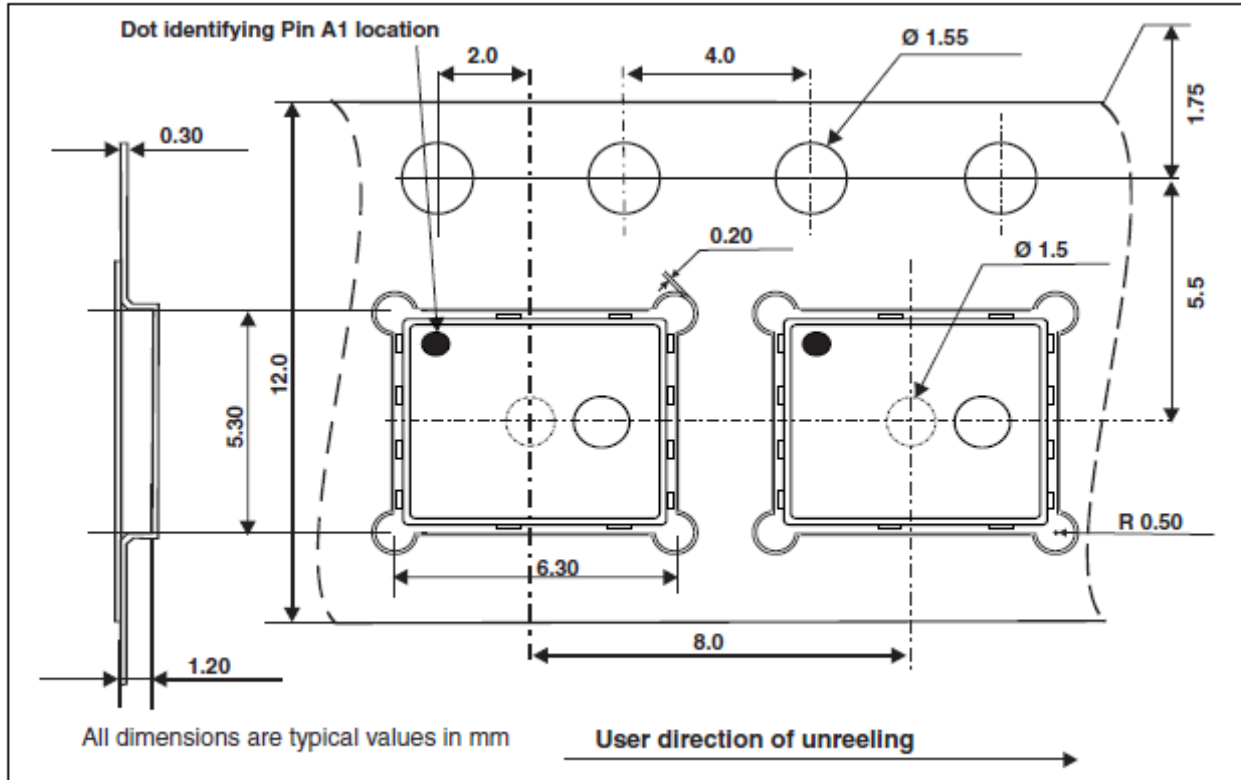
Fig. 6 - Typical Transient Thermal Impedance Per Diode

6. Packing Specification

Tape&reel packing




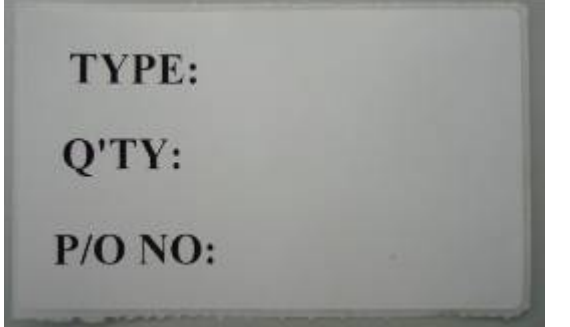
Packing size:3000 /reel(13' reel)

Figure 12. Tape and reel specifications





7. DESCRIPTION of BOX LABEL

	
1) Inner Box Label	2) Inner Box Label
	
3) Outer Box Label	4) Outer Box Label