

## Product Specification

GOODARK Type (Solar Diode)

**MBRB1545**

Construction : Schottky Barrier Rectifier

Application : For General Purpose

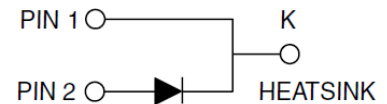
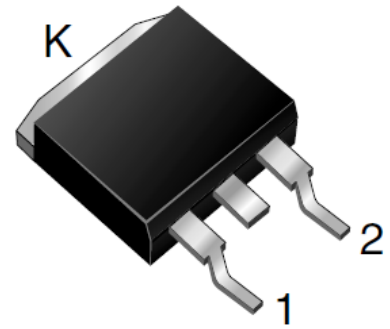
(Manufacturer) :

Suzhou Goodark Electronics Co.,Ltd

Prepared on May. 10<sup>th</sup>, 2011

Prepared: R &amp; D Department

Approva: QRA Department

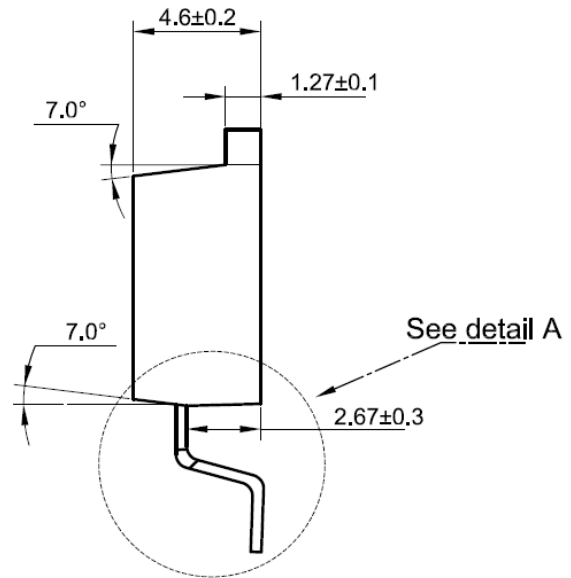
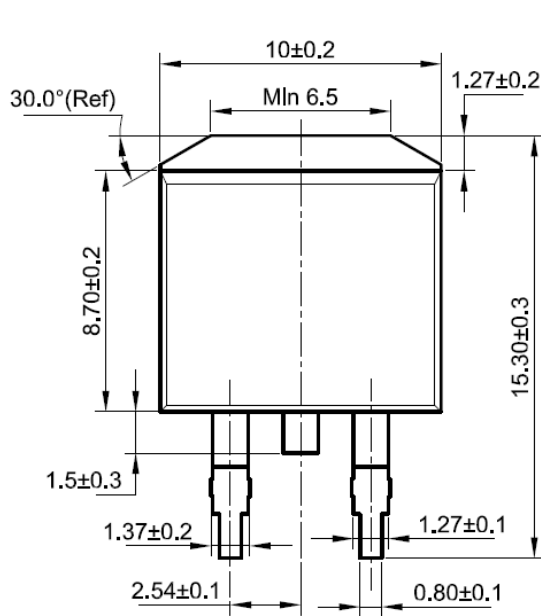
**SCHOTTKY BARRIER RECTIFIER****15 AMPERES****45 VOLTS****0.54V(15A Type )/Low Vf Schotty**

### CONTENTS

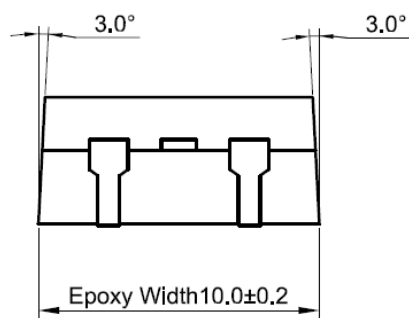
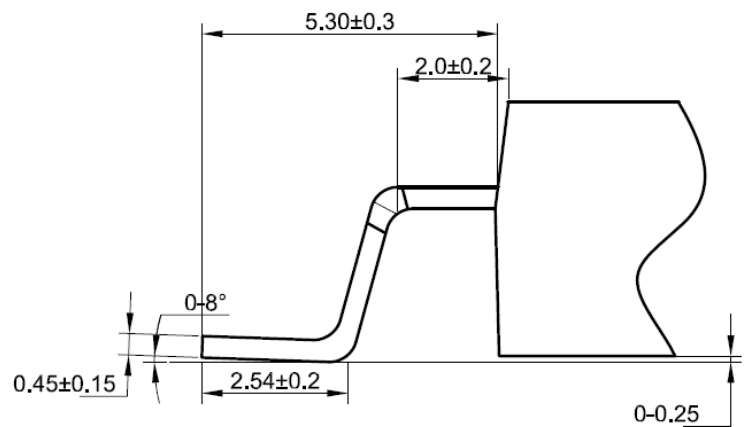
1. Package Outline
2. Marking
3. Features& Mechanical Characteristics
4. Maximum Ratings and Electrical Characteristics
5. Rating and characteristic Curves
6. Packing Specification PACKAGING SPECIFICATION
7. Description of Box Label

1. Package Outline (TO263)

UNIT:mm

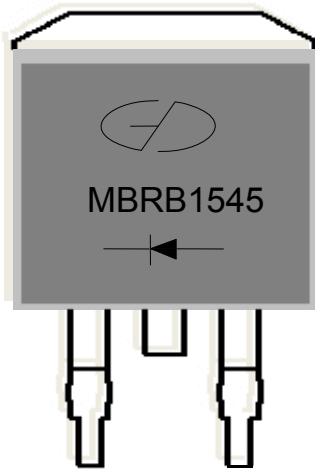


**Detail A**



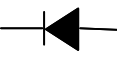
Lead Frame Material : Copper    Plating: Pure Tin Plating

## 2.MARKING



1. Part Name : MBRB1545

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: 1.4grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max.for10 sec
- Shipped 50 units per plastic tube or tape reel packing 800/reel

### 4.Maximum Ratings and Electrical Characteristics

MAXIMUM RATINGS and ELECTRICAL CHARACTERISTICS(TC=25°C unless otherwise moted)						
PARAMETER	TEST CONDITIONS		SYMBOL	MBRB1545	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	250	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=15A IF=15A	TC=25°C TC=125°C	VF	0.57 0.49	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

#### Note:

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

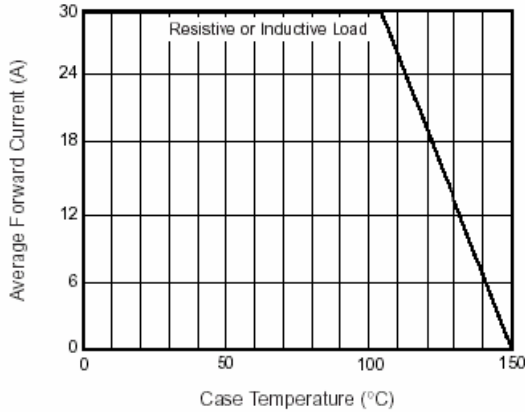


## 5. Rating and Characteristic Curves

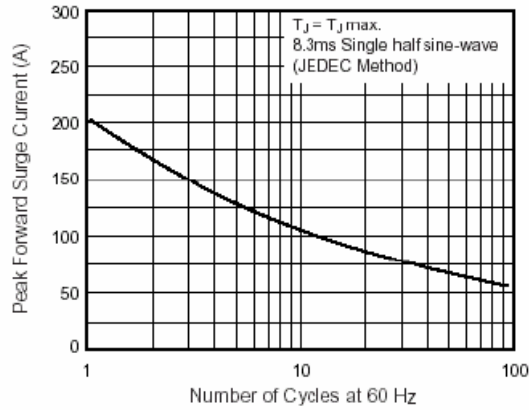
( $T_c=25^{\circ}\text{C}$  Unless otherwise noted)

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

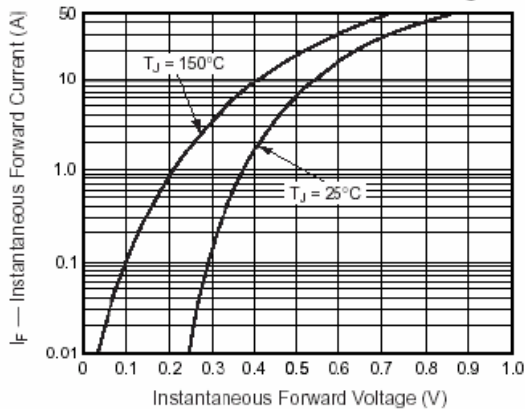
**Fig. 1 – Forward Current Derating Curve**



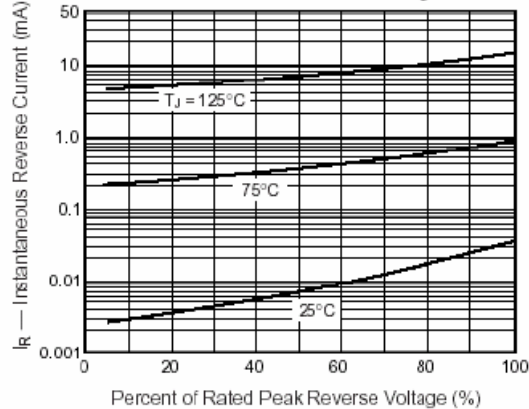
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



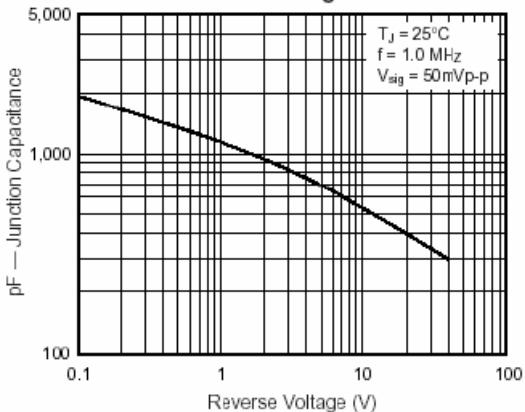
**Fig. 3 – Typical Instantaneous Forward Characteristics Per Leg**



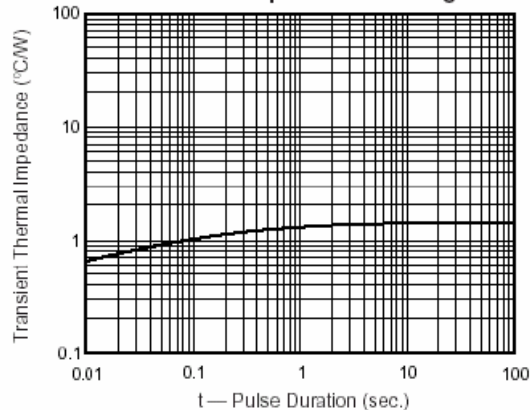
**Fig. 4 – Typical Reverse Characteristics Per Leg**



**Fig. 5 – Typical Junction Capacitance Per Leg**






**Fig. 6 – Typical Transient Thermal Impedance Per Leg**



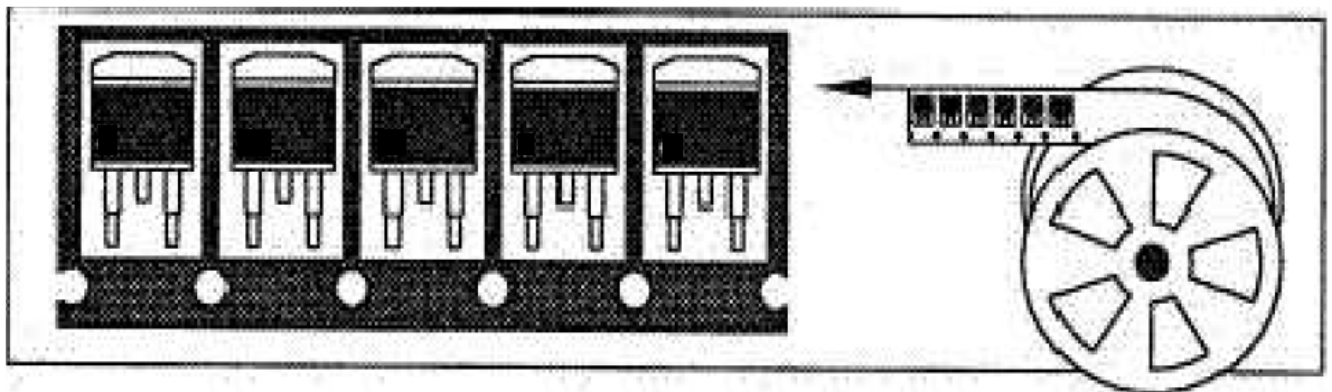
## 6. Packing Specification

### 6.1 Tube packing



	
1 ) Tube : 50units	2) Inner Box: 20 tube(1000units)
	
3) Outer Box: 10 inner box (10,000units)	

### 6.2 Tape&reel packing

Packing size:800 /reel( 13' reel)



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>