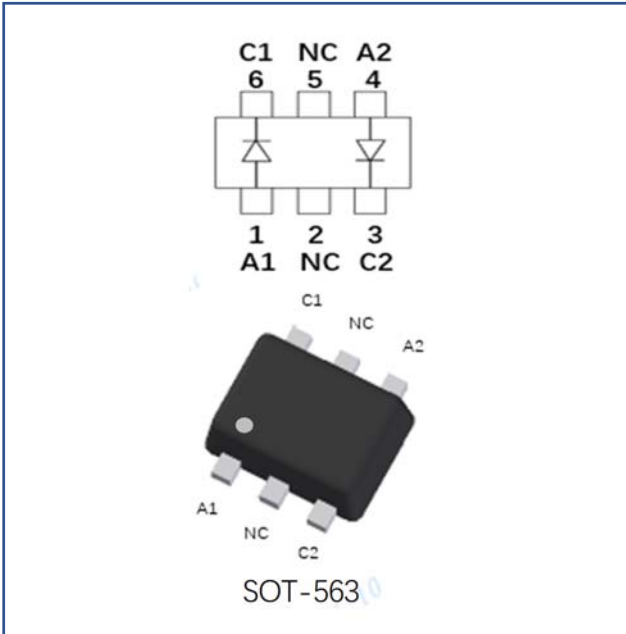


## Switching Diode



### Features

- Moisture sensitivity level 1
- Reverse voltage: 100V
- Average forward current : 200mA

### Application

- High frequency rectifier
- Signal switching

### Mechanical data

- **Package**: SOT-563
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■ Maximum Ratings (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Value
Device marking code			KAL
Continuous reverse voltage	$V_R$	V	100
Forward continuous current	$I_F$	mA	200
Non-repetitive peak forward surge current @t=8.3ms half-sine wave	$I_{FSM}$	A	1.5
Non-repetitive surge peak forward current @ t=1ms square wave			1.6
Power dissipation	$P_D$	mW	150
Junction temperature	$T_J$	°C	-55 to +150
Storage temperature	$T_{STG}$	°C	-55 to +150



# MMBD4448V

RoHS  
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## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Reverse voltage	V <sub>R</sub>	V	I <sub>R</sub> =2.5uA	80		
Forward voltage	V <sub>F1</sub>	V	I <sub>F</sub> =5mA			0.720
	V <sub>F2</sub>	V	I <sub>F</sub> =10mA			0.855
	V <sub>F3</sub>	V	I <sub>F</sub> =50mA			1.0
	V <sub>F4</sub>	V	I <sub>F</sub> =150mA			1.25
Reverse current	I <sub>R1</sub>	nA	V <sub>R</sub> =20V			25
	I <sub>R2</sub>	uA	V <sub>R</sub> =70V			0.1
Junction capacitance	C <sub>j</sub>	pF	f=1.0MHz, V <sub>R</sub> =6.0V			3.5
Reverse recovery time	T <sub>rr</sub>	ns	V <sub>R</sub> =6.0V, I <sub>F</sub> =5.0mA			4

## ■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R <sub>θJ-A</sub> <sup>(1)</sup>	°C/W	833
Thermal resistance, junction-to-case	R <sub>θJ-C</sub> <sup>(1)</sup>	°C/W	667

### Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 25.4mm\*25.4mm copper pad areas



## ■ Characteristics

Fig 1:  $P_D$ - $T_a$  Curve

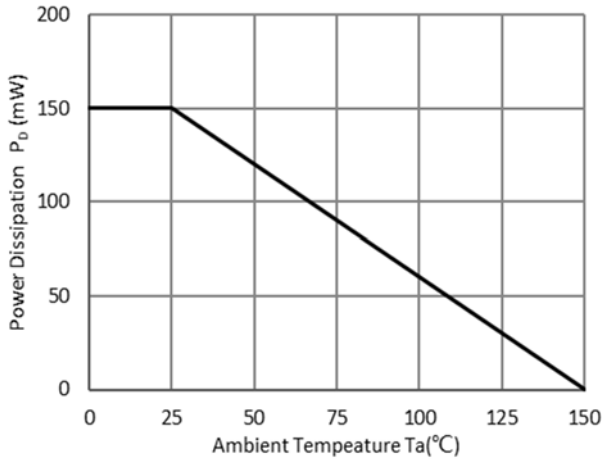


Fig 2: Capacitance Capability

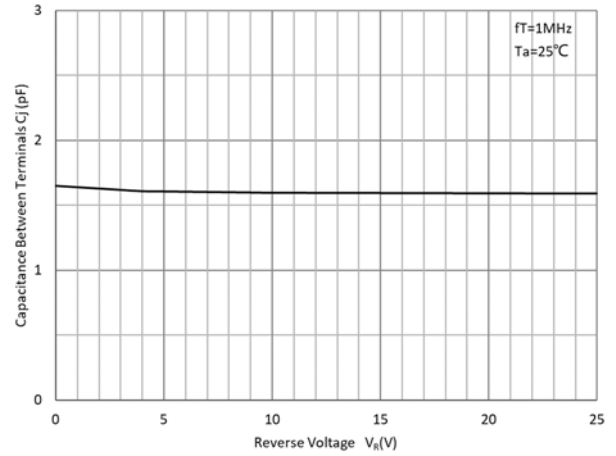


Fig 3: Typical Forward Characteristics

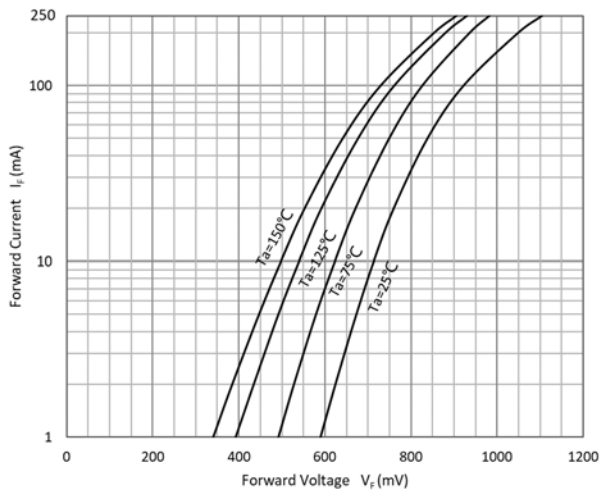
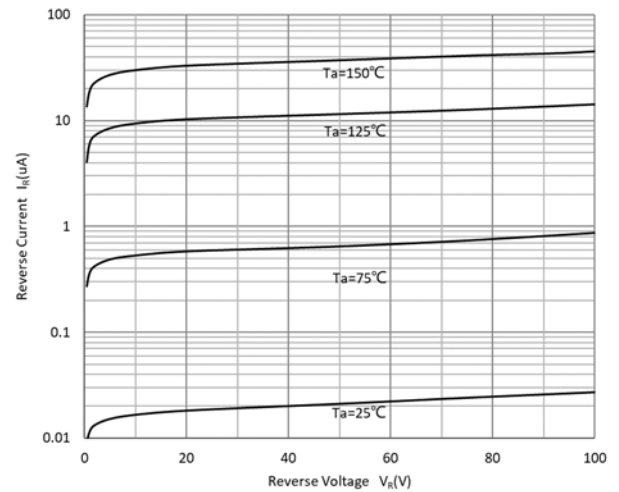


Fig 4: Typical Reverse Characteristics





# MMBD4448V

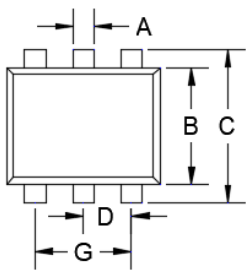
RoHS  
COMPLIANT

## Ordering Information

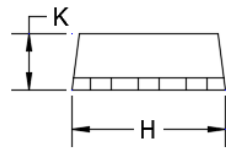
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
MMBD4448V	F2	Approximate 0.0035	3000	30000	120000	7" reel

## Outline Dimensions

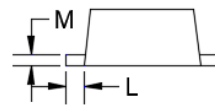
SOT-563



TOP VIEW



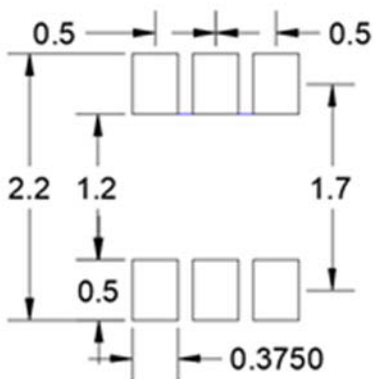
SIDE VIEW



SIDE VIEW

DIM	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MM	MAX
A	0.006	0.011	0.150	0.300
B	0.043	0.051	1.100	1.300
C	0.059	0.067	1.500	1.700
D	0.016	0.024	0.400	0.600
G	0.035	0.043	0.900	1.100
H	0.059	0.067	1.500	1.700
K	0.021	0.026	0.550	0.650
L	0.004	0.011	0.100	0.300
M	0.004	0.007	0.100	0.180

## Suggested Pad Layout



UNIT:mm



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