

## Small Signal Product

## Switching Diode

**FEATURES**

- Fast switching speed
- Surface device type mounting
- Moisture sensitivity level 1
- High conductance power dissipation
- For general purpose switching applications
- Pb free version and RoHS compliant
- Packing code with suffix "G" means green compound (halogen-free)


**SOT-363**

**MECHANICAL DATA**

- Case: SOT-363 small outline plastic package
- Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed : 260°C/10s

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P <sub>D</sub>	200	mW
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	80	V
Reverse Voltage	V <sub>R</sub>	57	V
Average Rectified Forward Current	I <sub>F(AV)</sub>	500	mA
Average Rectified Output Current	I <sub>O</sub>	250	mA
Non-Repetitive Peak Forward Surge Current	I <sub>FSM</sub>	@ t = 1 μs	4
		@ t = 1 s	1.5
Thermal Resistance (Junction to Ambient)	R <sub>θJA</sub>	625	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to 150	°C

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage	V <sub>(BR)</sub>	80	-	V
Forward Voltage	V <sub>F</sub>	I <sub>R</sub> =100μA	0.620	0.715
		I <sub>F</sub> =5.0mA	-	0.855
		I <sub>F</sub> =10mA	-	1.000
		I <sub>F</sub> =100mA	-	1.250
Reverse Leakage Current	V <sub>F</sub>	V <sub>R</sub> =70V	-	100
		V <sub>R</sub> =75V, T <sub>J</sub> =150°C	-	50
		V <sub>R</sub> =25V, T <sub>J</sub> =150°C	-	30
		V <sub>R</sub> =20V	-	25
Junction Capacitance	C <sub>J</sub>	-	3.5	pF
Reverse Recovery Time	t <sub>rr</sub>	-	4.0	ns

Note 1: Device mounted on FR-4 PCB, 1 inch × 0.85 inch × 0.062 inch

Note 2: Short duration test pulse used to minimize self-heating effect

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ORDERING INFORMATION

PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
MBD4448Hxxx (Note 1, 2)	RE	G	SOT-363	3K / 7" Reel

Note 1: "xxx" is Device Code from "AQW" - "TW"

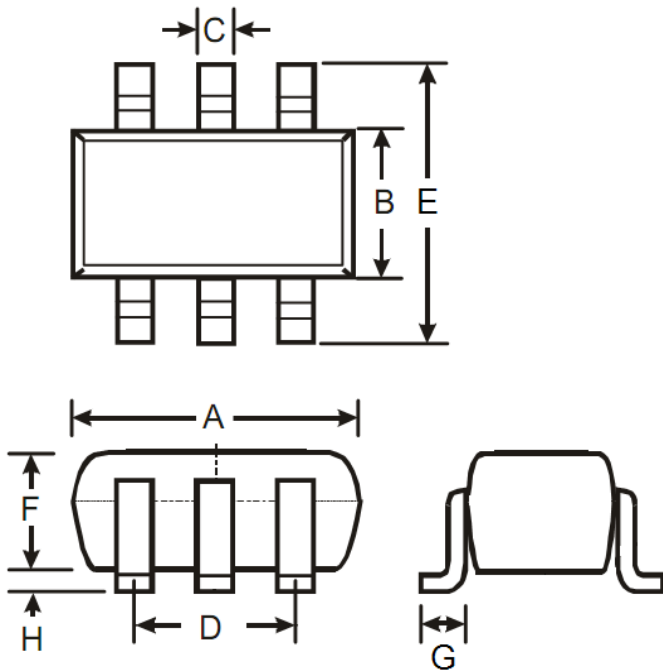
Note 2: Whole series with green compound

EXAMPLE

PREFERRED P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
MBD4448HTW REG	MBD4448HTW	RE	G	Green compound

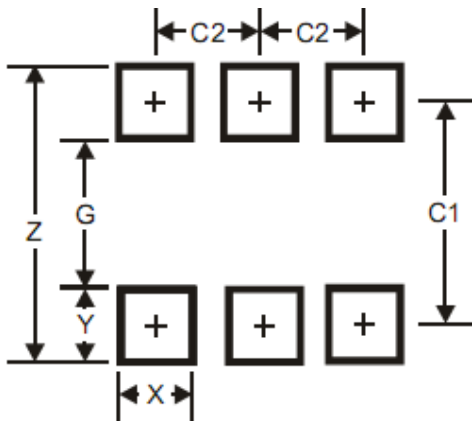
DIMENSIONS

**SOT-363**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.00	2.20	0.079	0.087
B	1.15	1.35	0.045	0.053
C	0.15	0.35	0.006	0.014
D	1.20	1.40	0.047	0.055
E	2.15	2.45	0.085	0.096
F	0.85	1.05	0.033	0.041
G	0.25	0.46	0.010	0.018
H	0.00	0.10	0.000	0.004

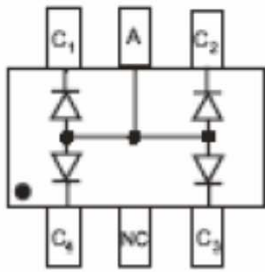
SUGGESTED PAD LAYOUT



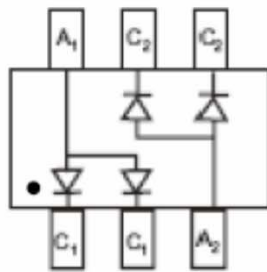
DIM.	Unit (mm)		Unit (inch)	
	Typ.		Typ.	
Z	2.50		0.098	
G	1.30		0.051	
X	0.42		0.017	
Y	0.60		0.024	
C1	1.90		0.075	
C2	0.65		0.026	

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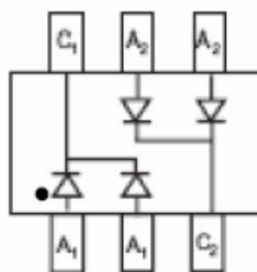
PIN CONFIGURATION



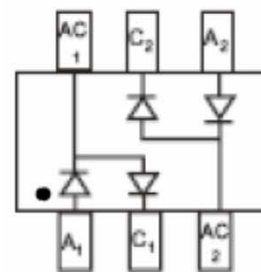
**MBD4448HAQW**



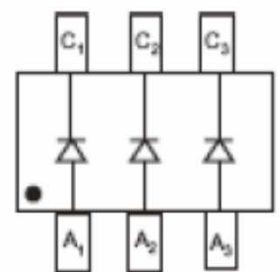
**MBD4448HADW**



**MBD4448HCDW**



**MBD4448HSDW**



**MBD4448HTW**

MARKING

Part no.	Marking code
MBD4448HAQW	KA5
MBD4448HADW	KA6
MBD4448HCDW	KA7
MBD4448HSDW	KA8
MBD4448HTW	KAA

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