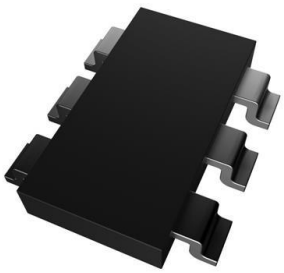
MMBD4448HSDW-TP Datasheet



DiGi Electronics Part Number	MMBD4448HSDW-TP-DG
Manufacturer	Micro Commercial Co
Manufacturer Product Number	MMBD4448HSDW-TP
Description	DIODE ARRAY GP 80V 250MA SOT363
Detailed Description	Diode Array 2 Pair Series Connection 80 V 250mA Surface Mount 6-TSSOP, SC-88, SOT-363

https://www.DiGi-Electronics.com

This model MMBD4448HSDW-TP is available at DiGi Electronics.

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Manufacturer Product Number:	Manufacturer:
MMBD4448HSDW-TP	Micro Commercial Co
Series:	Product Status:
-	Active
Diode Configuration:	Technology:
2 Pair Series Connection	Standard
Voltage - DC Reverse (Vr) (Max):	Current - Average Rectified (Io) (per Diode):
80 V	250mA
Voltage - Forward (Vf) (Max) @ If:	Speed:
1.25 V @ 150 mA	Fast Recovery =< 500ns, > 200mA (Io)
Reverse Recovery Time (trr):	Current - Reverse Leakage @ Vr:
4 ns	100 nA @ 70 V
Operating Temperature - Junction:	Mounting Type:
150°C (Max)	Surface Mount
Package / Case:	Supplier Device Package:
6-TSSOP, SC-88, SOT-363	SOT-363
Base Product Number:	
MMBD4448	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.10.0070	

Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- High Conductance, Power Dissipation
- For General Purpose Switching Applications
- Halogen Free. “Green” Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

200mW Switching Diodes

Maximum Ratings

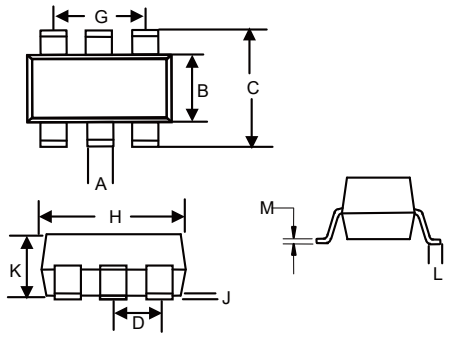
- Operating Junction Temperature Range: 150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance:625°C/W Junction to Ambient

MCC Part Number	Device Marking	Repetitive Peak Reverse Voltage V_{RRM}	RMS Reverse Voltage $V_{R(RMS)}$	DC Blocking Voltage V_R
MMBD4448HAQW	KA5	80V	57V	80V
MMBD4448HADW	KA6	80V	57V	80V
MMBD4448HCDW	KA7	80V	57V	80V
MMBD4448HSDW	KAB	80V	57V	80V
MMBD4448HCQW	KA4	80V	57V	80V
MMBD4448HTW	KAA	80V	57V	80V

Non-Repetitive Peak Reverse Voltage	V_{RM}	100V	
Working Peak Reverse Voltage	V_{RWM}	80V	
Forward Continuous Current	I_{FM}	500mA	
Average Rectified Output Current	I_o	250mA	
Non-Repetitive Peak Forward Surge Current	I_{FSM}	4.0A 1.5A	@ t=1.0us @ t=1.0s
Power Dissipation	P_D	200mW	

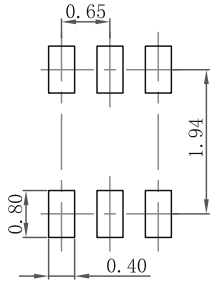
Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

SOT-363



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.014	0.15	0.35	
B	0.045	0.053	1.15	1.35	
C	0.079	0.096	2.00	2.45	
D	0.026		0.65 Nominal		
G	0.047	0.055	1.20	1.40	
H	0.071	0.087	1.80	2.20	
J	-----	0.004	-----	0.10	
K	0.031	0.043	0.80	1.10	
L	0.010	0.018	0.26	0.46	
M	0.003	0.006	0.08	0.15	

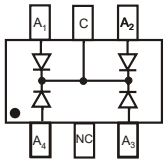
Suggested Solder Pad Layout



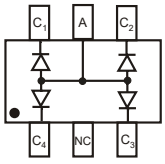
Electrical Characteristics @ 25°C Unless Otherwise Specified

Minimum Breakdown Voltage	V_{BR}	80V	I_R=100μA
Maximum Forward Voltage	V_F	0.720V 0.855V 1.000V 1.250V	I_F=5.0mA I_F=10.0mA I_F=50.0mA I_F=150.0mA
Minimum Forward Voltage	V_F	0.620V	I_F=5.0mA
Maximum Peak Reverse voltage	I_R	25nA 100nA 30μA 50μA	VR=20V, T_J=25ºC VR=70V, T_J=25ºC VR=25V, T_J=150ºC VR=75V, T_J=150ºC
Maximum Total Capacitance	C_T	3.5pF	V_R=6.0V,f=1.0MHz
Maximum Reverse Recovery Time	t_{rr}	4.0ns	I_F=5mA, V_R=6V

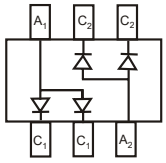
Internal Structure



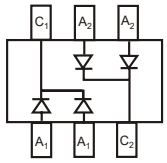
Marking: KA4
MMBD4448HCQW



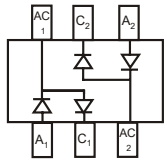
Marking: KA5
MMBD4448HAQW



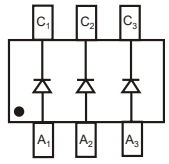
Marking: KA6
MMBD4448HADW



Marking: KA7
MMBD4448HCDW



Marking: KAB
MMBD4448HSDW



Marking: KAA
MMBD4448HTW

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

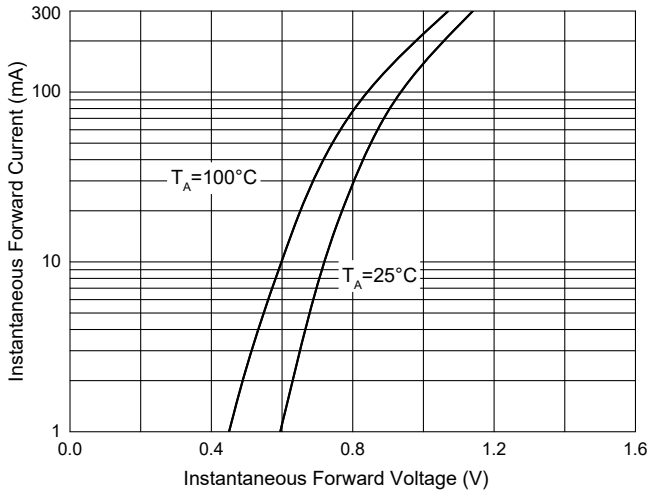


Fig. 2 - Typical Reverse Leakage Characteristics

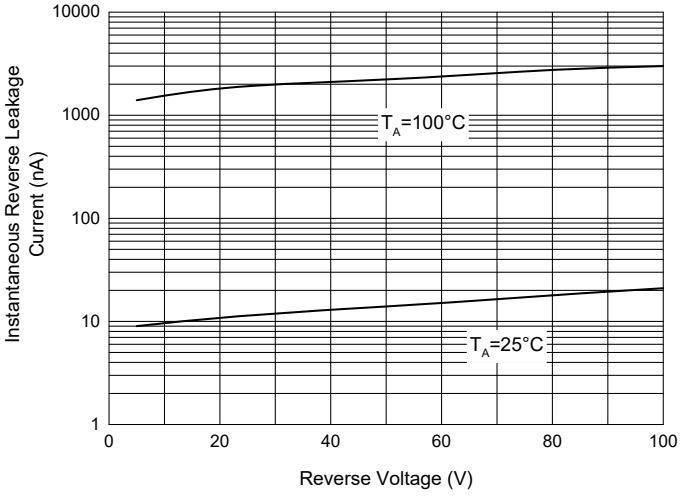
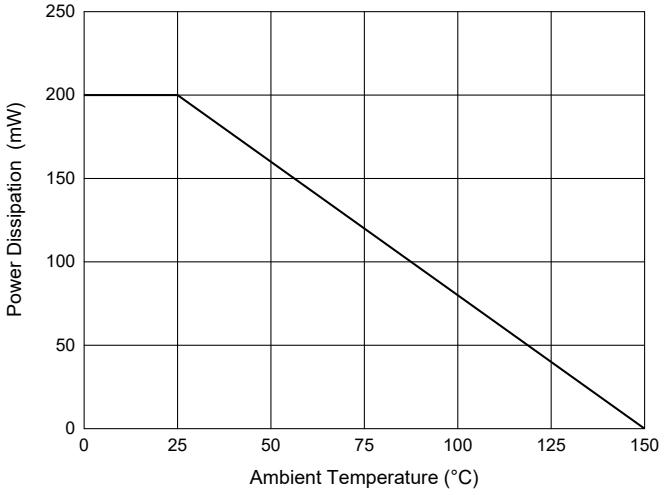


Fig. 3 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel
Part Number-TPQ2	Tape&Reel: 3Kpcs/Reel

For packaging details,go to our website at https://www.mccsemi.com/pdf/ProductPackaging/SOT-363%20Package.pdf

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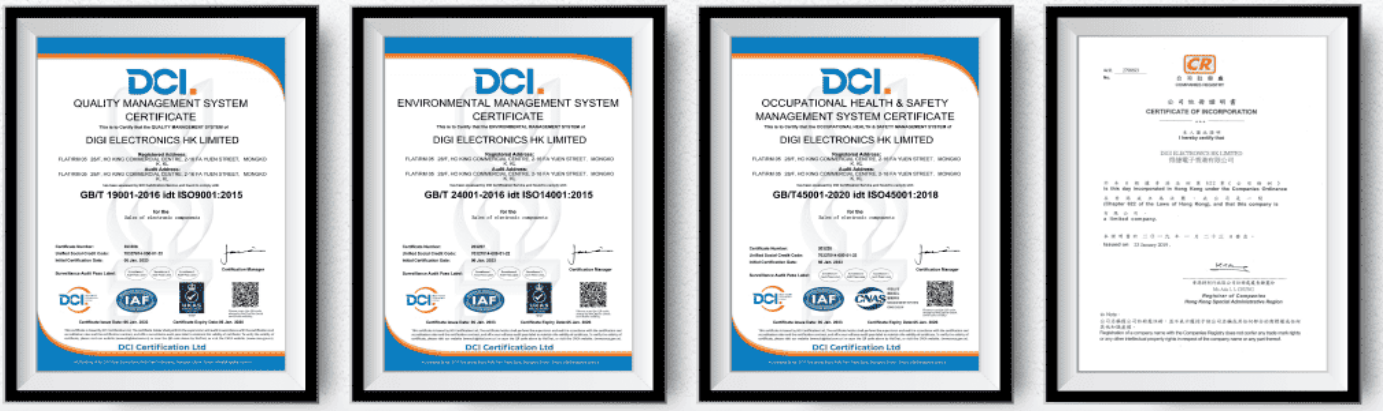

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