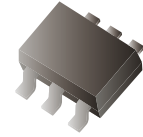


MMBD4448DW-HF

**RoHS Device
Halogen Free**



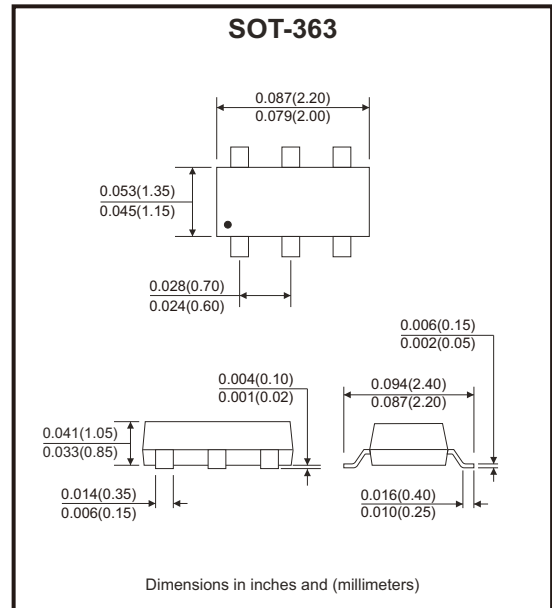
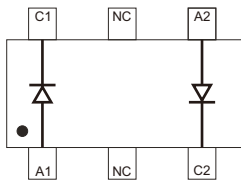
Features

- Fast switching speed.
- For general purpose switching application.
- Ultra-small surface mount package.
- High conductance.

Mechanical data

- Case: SOT-363, molded plastic.
- Mounting position: Any.

Circuit Diagram



Maximum Ratings (at TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	V_{RM}	100	V
Peak repetitive reverse voltage	V_{RRM}	75	V
Working peak reverse voltage	V_{RWM}	75	V
DC blocking voltage	V_R	75	V
RMS reverse voltage	V_{RMS}	53	V
Forward continuous current	I_{FM}	500	mA
Average rectified output current	I_O	250	mA
Non-repetitive peak forward surge current @ t = 8.3ms	I_{FSM}	2	A
Power dissipation	P_D	200	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	625	°C/W
Junction and storage temperature	T_J, T_{STG}	-65 to +150	°C

Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	$I_R = 10\mu A$	$V_{(BR)}$	75			V
Forward voltage	$I_F = 5mA$	V_F	0.62		0.720	V
	$I_F = 10mA$			0.855		
	$I_F = 50mA$			1.00		
	$I_F = 150mA$			1.25		
Reverse current	$V_R = 75V$	I_R			2.5	μA
	$V_R = 75V, T_J = 150^\circ C$			50		
	$V_R = 25V, T_J = 150^\circ C$			30		
	$V_R = 20V$			25	nA	
Total capacitance	$V_R = 10V, f = 1MHz, I_E = 0$	C_T			4	pF
Reverse recovery time	$I_F = I_R = 10mA, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	t_{rr}			4	nS

Typical Rating and Characteristic Curves (MMBD4448DW-HF)

Fig.1 - Typical Forward Characteristics

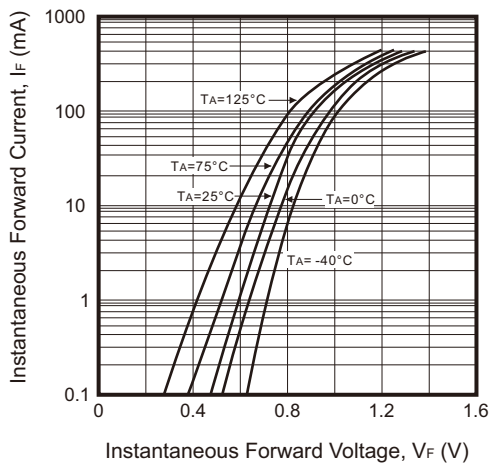


Fig.2 - Typical Reverse Characteristics

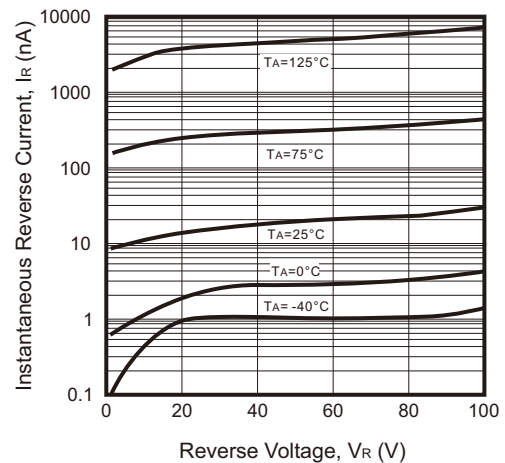


Fig.3 - Typical Total Capacitance vs. Reverse Voltage

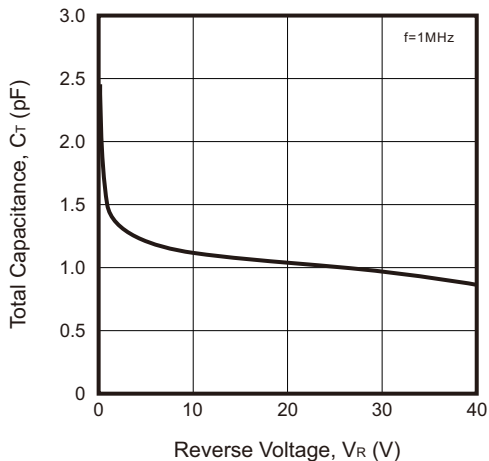
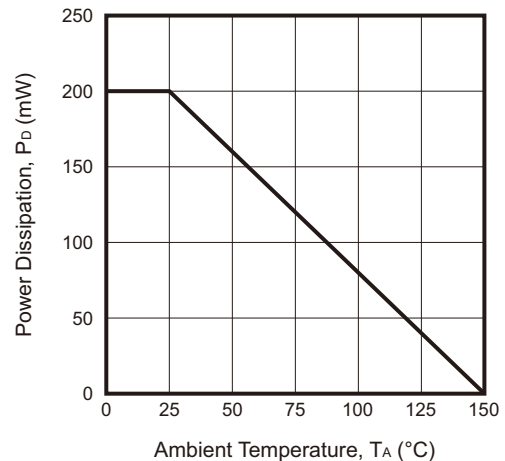
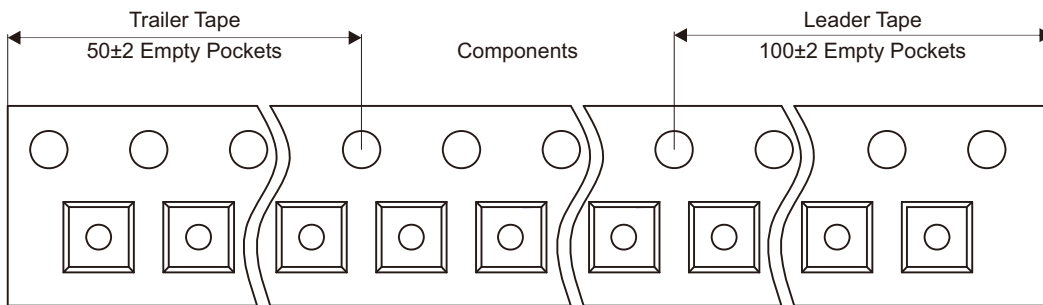
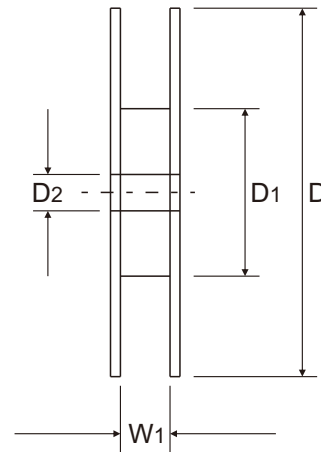
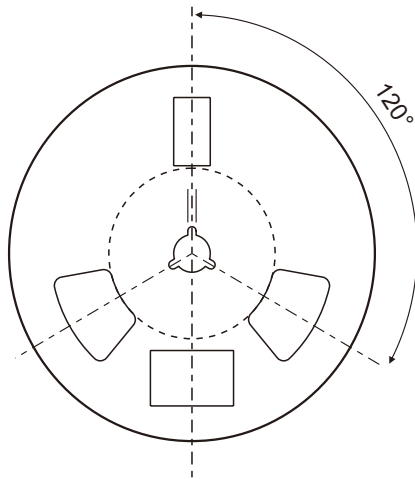
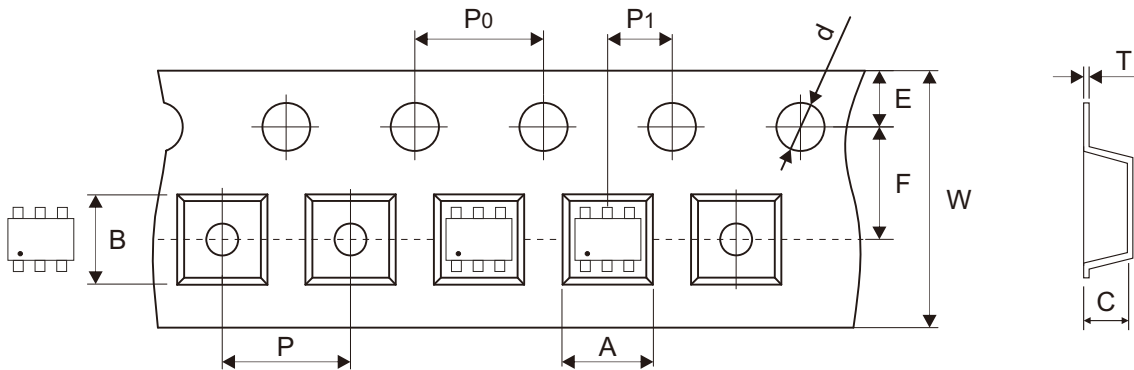


Fig.4 - Power Derating Curve, Total Package



Reel Taping Specification

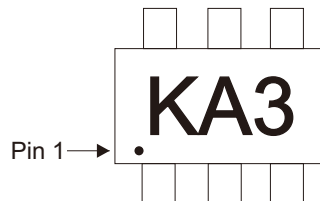


SOT-363	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.40 ± 0.10	2.50 ± 0.10	1.20 ± 0.10	1.50 ± 0.10	178.00 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.094 ± 0.004	0.098 ± 0.004	0.047 ± 0.004	0.059 ± 0.004	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

SOT-363	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.02	8.00 + 0.30 - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	0.315 + 0.012 - 0.004	0.374 ± 0.039

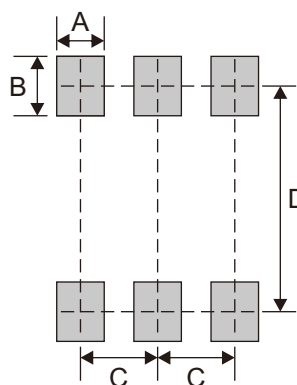
Marking Code

Part Number	Marking Code
MMBD4448DW-HF	KA3



Suggested P.C.B. PAD Layout

SIZE	SOT-363	
	(mm)	(inch)
A	0.40	0.016
B	0.50	0.020
C	0.65	0.026
D	1.90	0.075



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-363	3,000	7