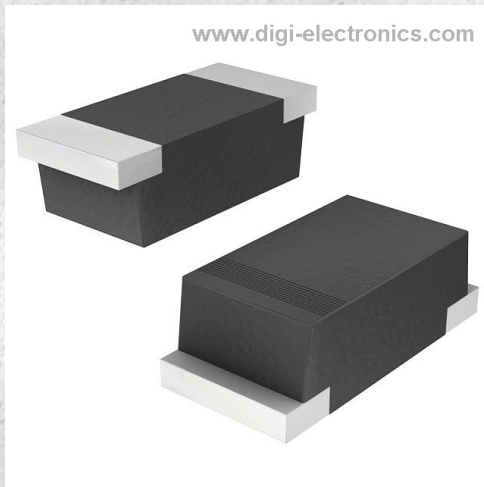


CDBMT140-HF Datasheet



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	CDBMT140-HF-DG
Manufacturer	Comchip Technology
Manufacturer Product Number	CDBMT140-HF
Description	DIODE SCHOTTKY 40V 1A SOD123H
Detailed Description	Diode 40 V 1A Surface Mount SOD-123H

This model CDBMT140-HF is available at DiGi Electronics.

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We welcome your inquiries regarding pricing, lead time, or other product-related questions.

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Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

CDBMT140-HF

Series:

-

Technology:

Schottky

Current - Average Rectified (Io):

1A

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Capacitance @ Vr, F:

120pF @ 4V, 1MHz

Package / Case:

SOD-123H

Operating Temperature - Junction:

-55°C ~ 125°C

Manufacturer:

Comchip Technology

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

40 V

Voltage - Forward (Vf) (Max) @ If:

500 mV @ 1 A

Current - Reverse Leakage @ Vr:

500 µA @ 40 V

Mounting Type:

Surface Mount

Supplier Device Package:

SOD-123H

Base Product Number:

CDBMT140

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

Low Profile SMD Schottky Barrier Rectifiers



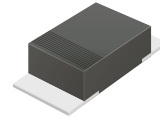
CDBMT140-HF Thru. CDBMT1200-HF

Reverse Voltage: 40 to 200 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

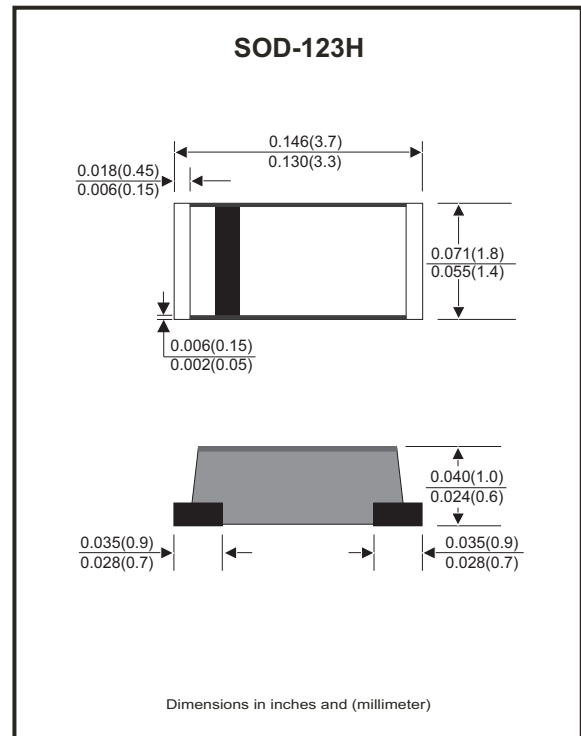


Features

- Excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guarding for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free part meets environmental standards of MIL-STD-19500/228

Mechanical data

- Epoxy: UL94-V0 rated flame retardant.
- Case: Molded plastic, SOD-123H/MINI SMA
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position: any
- Weight: 0.011 grams approx.



Maximum Ratings and Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	CDBMT 140-HF	CDBMT 160-HF	CDBMT 1100-HF	CDBMT 1150-HF	CDBMT 1200-HF	Units
Repetitive peak reverse voltage	V_{RRM}	40	60	100	150	200	V
RMS voltage	V_{RMS}	28	42	70	105	140	V
Continuous reverse voltage	V_R	40	60	100	150	200	V
Max. forward voltage @ $I_F=1.0A$	V_F	0.50	0.70	0.85	0.90	0.92	V
Operating Temperature	T_J	-55 to +125	-55 to +150				$^\circ\text{C}$

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Units
Forward rectified current	see Fig.1	I_o			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			30	A
Reverse Current	$V_R = V_{RRM}$ $T_J=25^\circ\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM}$ $T_J=100^\circ\text{C}$	I_R			10	mA
Thermal resistance	Junction to case	$R_{\theta JC}$		40		$^\circ\text{C/W}$
Diode Junction capacitance	$f=1\text{MHz}$ and applied 4V DC reverse Voltage	C_J		120		pF
Storage temperature		T_{STG}	-65		+175	$^\circ\text{C}$

Company reserves the right to improve product design, functions and reliability without notice.

REV: C

Low Profile SMD Schottky Barrier Rectifiers **Comchip** SMD Diode Specialist

Rating and Characteristic Curves (CDBMT140-HF Thru. CDBMT1200-HF)

Fig.1 - Typical Forward Current Derating Curve

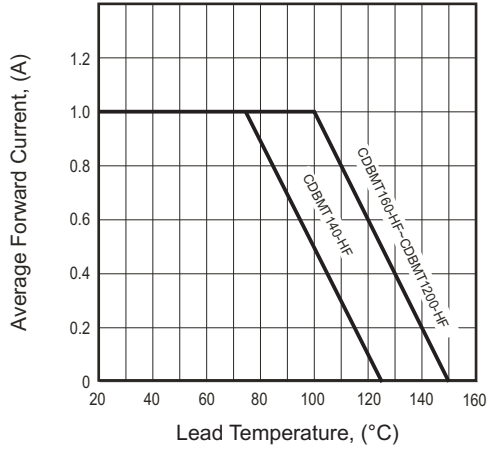


Fig.2 - Typical Forward Characteristics

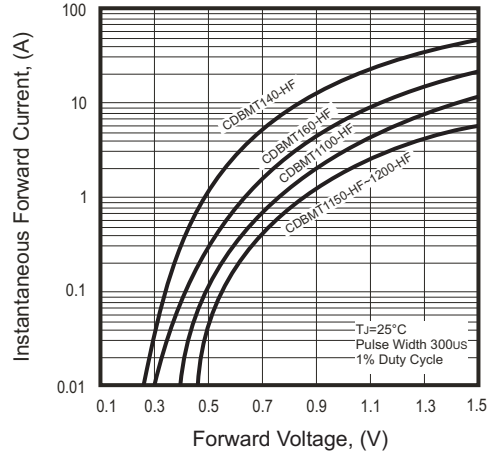


Fig.3 - Maximum Non-repetitive Forward Surge Current

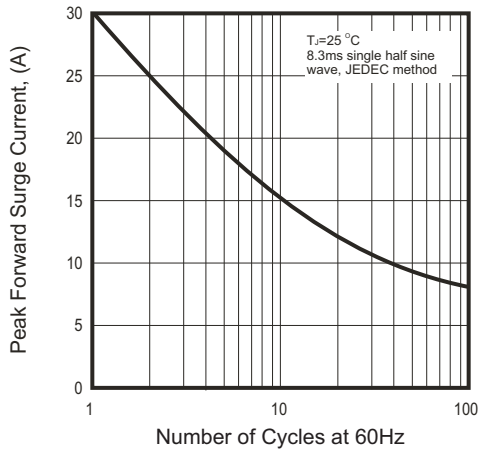


Fig.4 - Typical Junction Capacitance

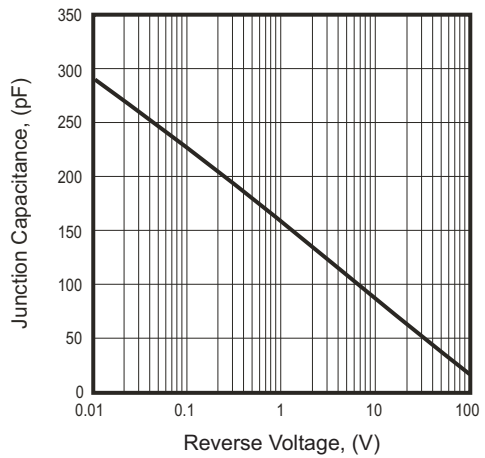
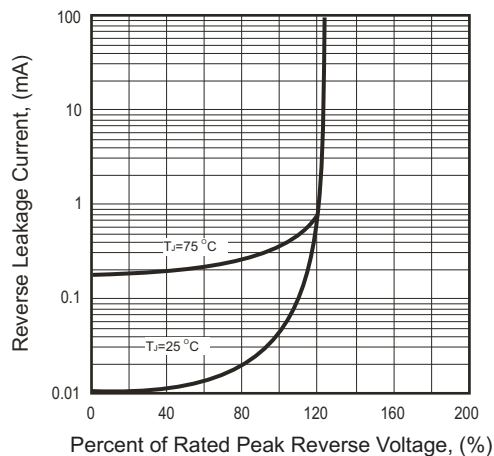
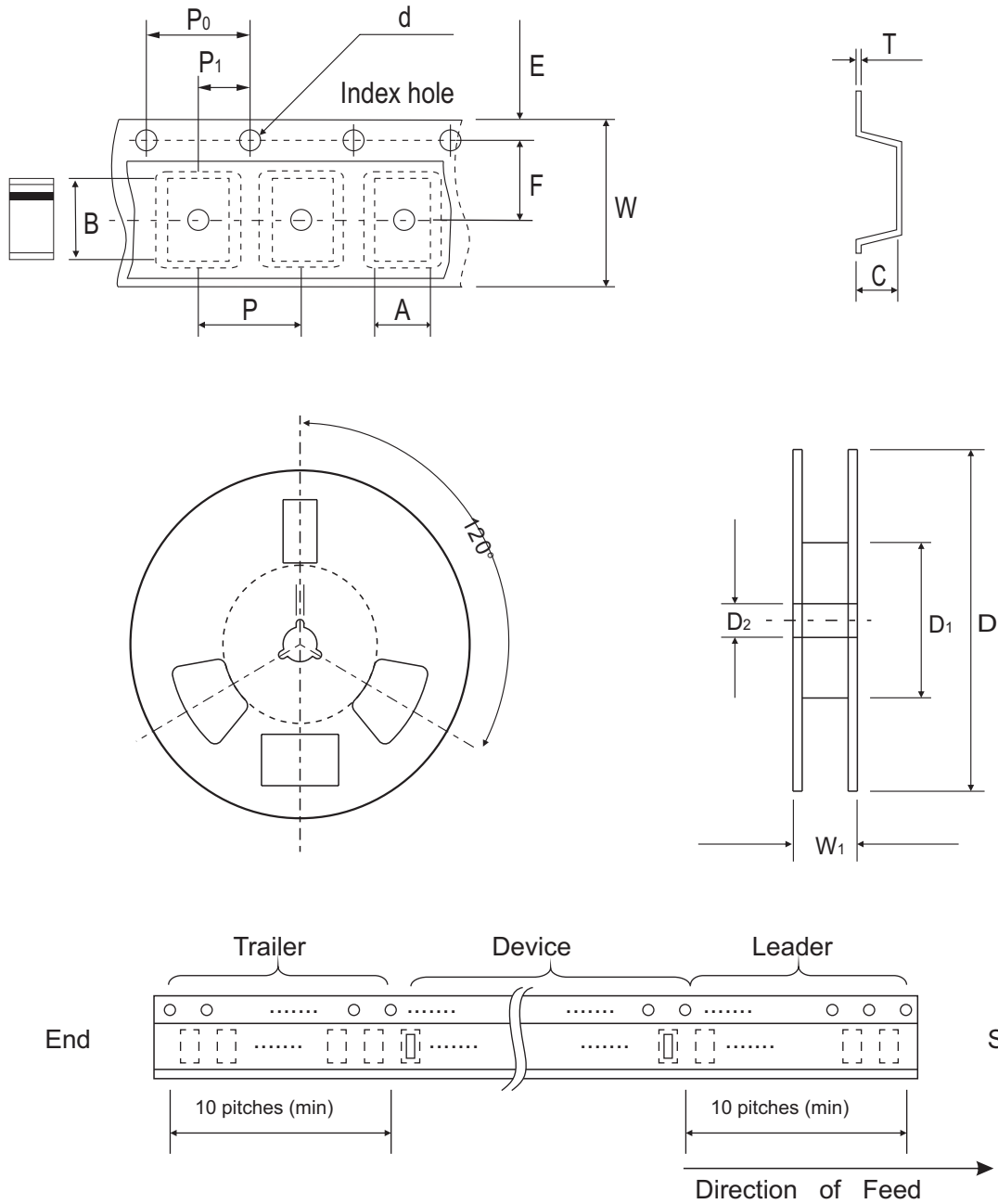


Fig.5 - Typical Reverse Characteristics



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Reel Taping Specification





SOD-123H	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.00 ± 0.10	3.85 ± 0.10	1.10 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	62.00 (min)	13.00 ± 0.50
	(inch)	0.079 ± 0.004	0.152 ± 0.004	0.043 ± 0.004	0.059 ± 0.004	7.007 ± 0.079	2.441 (min)	0.512 ± 0.020

SOD-123H	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.10	8.00 ± 0.30	11.40 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.04	0.315 ± 0.012	0.449 ± 0.039

Low Profile SMD Schottky Barrier Rectifiers **Comchip**

SMD Diode Specialist

Pinning information

Pin	Simplified outline	Symbol
PIN 1 Cathode PIN 2 Anode		

Marking Code

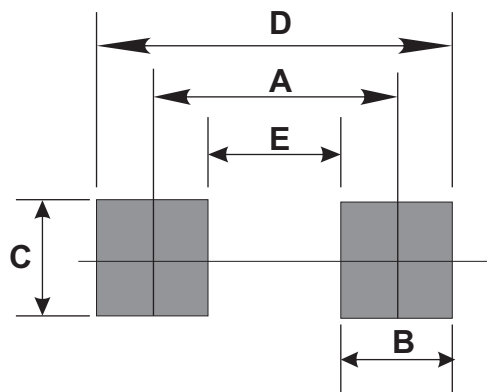
Part Number	Marking Code
CDBMT140-HF	14
CDBMT160-HF	16
CDBMT1100-HF	10
CDBMT1150-HF	115
CDBMT1200-HF	120



xx / xxx = Product type marking code

Suggested PAD Layout

SIZE	SOD-123H	
	(mm)	(inch)
A	3.00	0.118
B	1.30	0.051
C	1.80	0.071
D	4.30	0.169
E	1.70	0.067



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-123H	3,000	7

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