

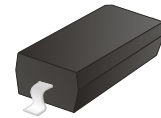
CDBW140R-HF Thru. CDBW1100R-HF

Reverse Voltage: 40 to 100 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

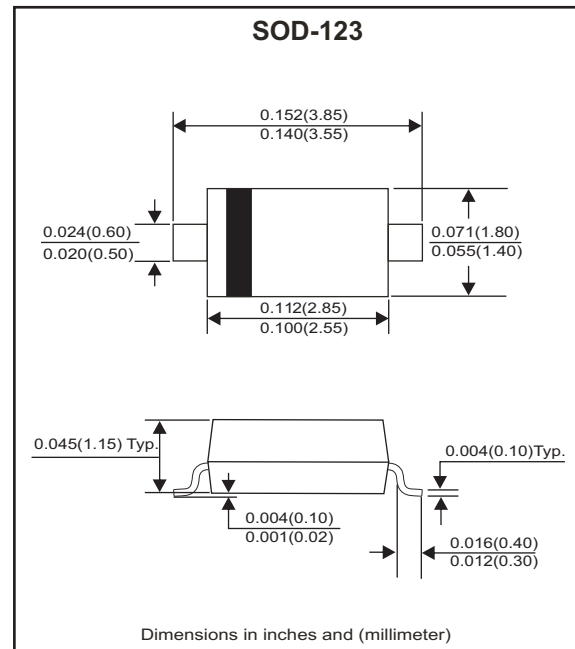


Features

- Low profile surface mount applications in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guard ring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.

Mechanical data

- Epoxy: UL94-V0 rate flame retardant.
- Case: Molded plastic, SOD-123
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.010 grams(approx.).



Maximum Ratings and Electrical Characteristics

Ratings at $T_a=25^\circ\text{C}$ unless otherwise noted.
Single phase, half wave, 60Hz, resistive or inductive loaded.
For capacitive load, derate current by 20% .

Parameter	Symbol	CDBW 140R-HF	CDBW 160R-HF	CDBW 1100R-HF	Units
Max. Repetitive Peak Reverse Voltage	V_{RRM}	40	60	100	V
Max. DC Blocking Voltage	V_{DC}	40	60	100	V
Max. RMS voltage	V_{RMS}	28	42	70	V
Max. Instantaneous Forward Voltage @ 1.0A, $T_A=25^\circ\text{C}$	V_F	0.55	0.75	0.86	V
Junction Temperature Range	T_J	-50 to +125	-50 to +150		$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-50 to +125	-50 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}			5.5	A
Reverse Current	$V_R = V_{RRM}$ $T_A=25^\circ\text{C}$	I_R			0.1	mA
Thermal Resistance	Junction to ambient	$R_{\theta JA}$		88		$^\circ\text{C/W}$
Diode Junction Capacitance	f=1MHz and applied 4V DC reverse Voltage	C_J		120		pF

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

REV: B

RATING AND CHARACTERISTIC CURVES (CDBW140R-HF thru. CDBW1100R-HF)

Fig.1 - Typical Forward Current Derating Curve

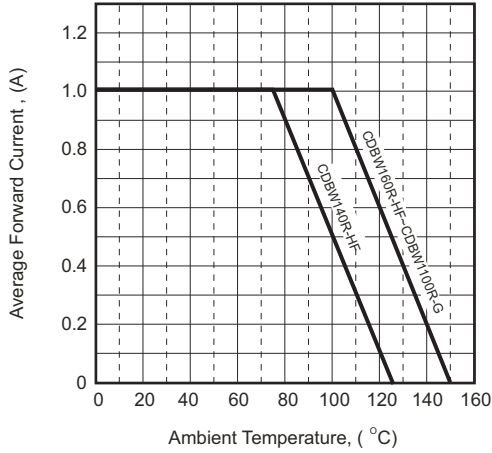


Fig.2 - Typical Forward Characteristics

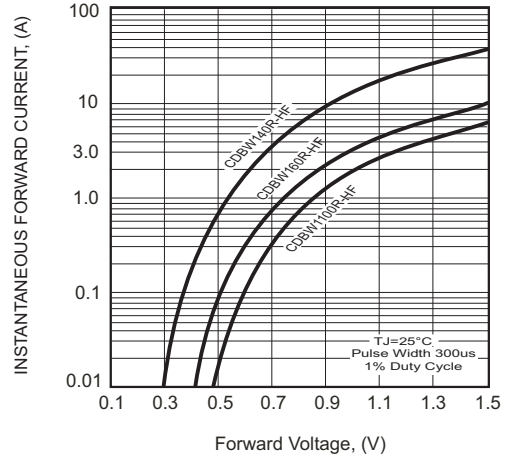


Fig.3 - Typical Junction Capacitance

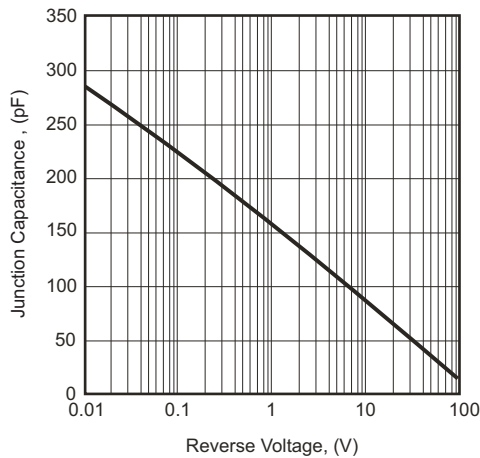


Fig.4A - Typical Reverse Characteristics (CDBW140R-HF)

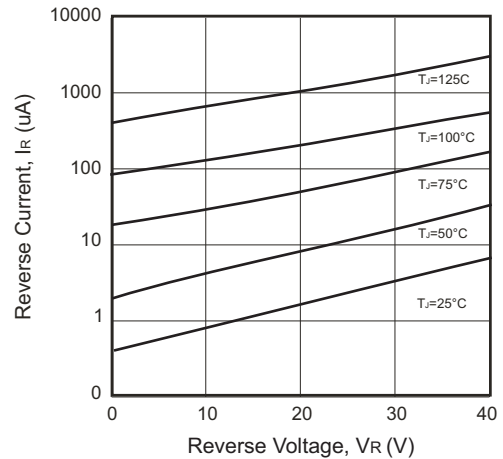


Fig.4B - Typical Reverse Characteristics (CDBW160R-HF)

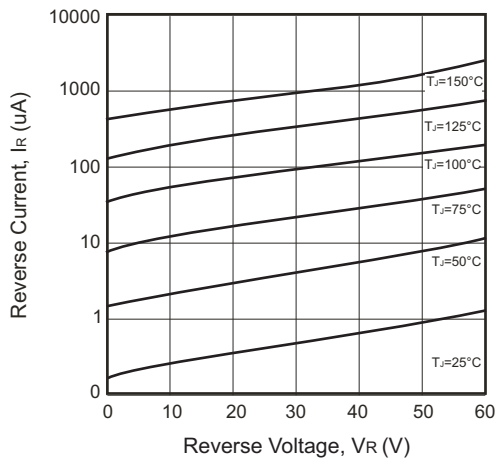
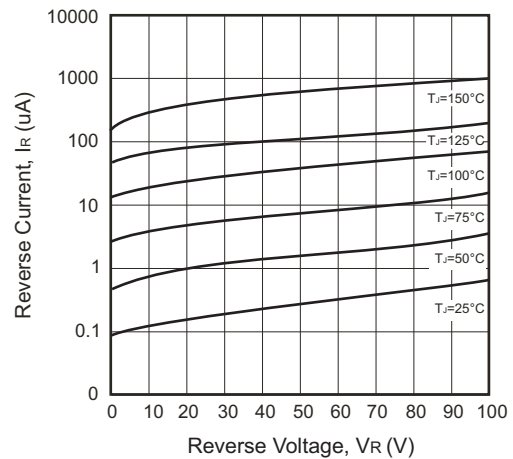


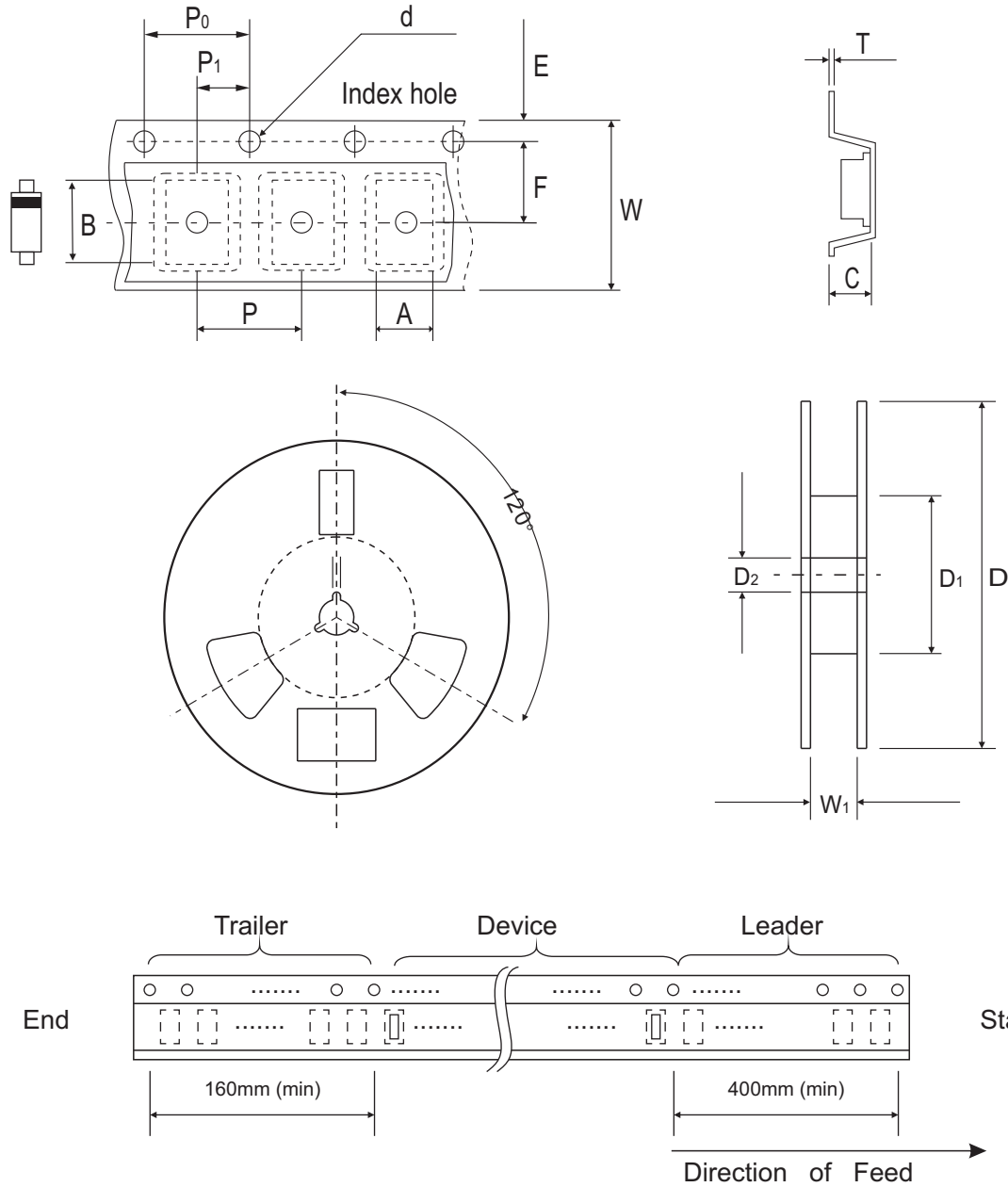
Fig.4C - Typical Reverse Characteristics (CDBW1100R-HF)



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Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.10	3.94 ± 0.10	1.57 ± 0.10	1.55 + 0.05	178 ± 1.00	54.0 ± 0.50	13.0 ± 0.50
	(inch)	0.073 ± 0.004	0.155 ± 0.004	0.062 ± 0.004	0.061 + 0.002	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

SOD-123	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00+0.20/-0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.158 ± 0.004	0.158 ± 0.004	0.079 ± 0.002	0.315+0.008/-0.004	0.374 ± 0.039

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REV: B

Marking Code

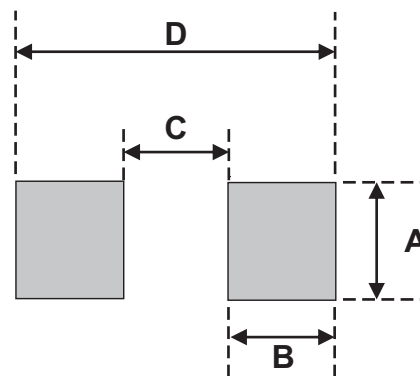
Part Number	Marking Code
CDBW140R-HF	SL
CDBW160R-HF	SM
CDBW1100R-HF	SN



xx= Product type marking code

Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	1.22	0.048
B	0.91	0.036
C	2.36	0.093
D	4.19	0.165



Standard Packaging

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

Mouser Electronics

Authorized Distributor

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