

## CDBD1040-HF Thru. CDBD10200-HF

Reverse Voltage: 40 to 200 Volts

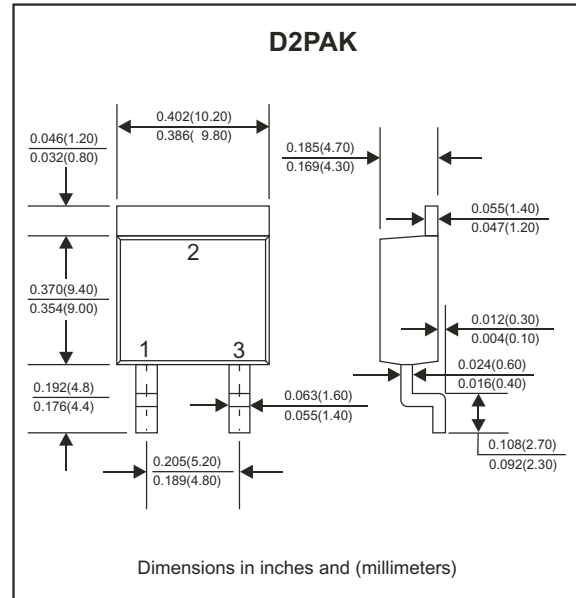
Forward Current: 10.0 Amp

RoHS Device

Halogen Free

### Features

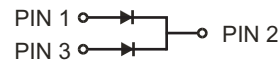
- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guard ring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free part meets environmental standards of MIL-STD-19500 /228



### Mechanical data

- Case: TO-263/D2PAK, molded plastic.
- Terminals: Solder plated, Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position: Any
- Weight: 1.46 grams (approx.).

### Circuit Diagram



### Maximum Ratings (At Ta=25°C, unless otherwise noted)

Parameter	Symbol	CDBD 1040-HF	CDBD 1060-HF	CDBD 10100-HF	CDBD 10150-HF	CDBD 10200-HF	Unit	
Repetitive peak reverse voltage	$V_{RRM}$	40	60	100	150	200	V	
Continuous reverse voltage	$V_R$	40	60	100	150	200	V	
RMS voltage	$V_{RMS}$	28	42	70	105	140	V	
Maximum forward rectified current (See fig. 1)	$I_O$	10.0					A	
Maximum forward voltage $I_F=5.0A$	$V_F$	0.55	0.75	0.85	1.00		V	
Maximum forward surge current, 8.3ms singlehalf sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$	150					A	
Maximum reverse current	$V_R=V_{RRM}$ $T_A=25^\circ C$	$I_R$					0.5	mA
	$V_R=V_{RRM}$ $T_A=100^\circ C$	$I_R$					50	mA
Typical thermal resistance	Junction to Case	$R_{\theta Jc}$					3.0	$^\circ C/W$
Operating temperature	$T_J$	-55 to +125	-55 to +150				$^\circ C$	
Storage temperature	$T_{STG}$	-65 to +175					$^\circ C$	

## RATING AND CHARACTERISTIC CURVES (CDBD1040-HF Thru. CDBD10200-HF)

FIG.1- Typical Forward Current Derating Curve

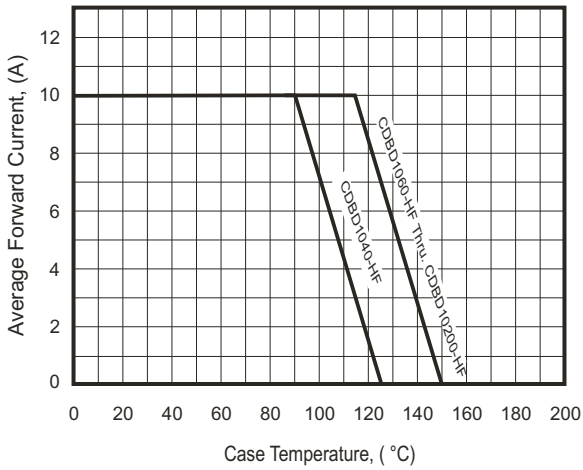


FIG.2- Typical Forward Characteristics

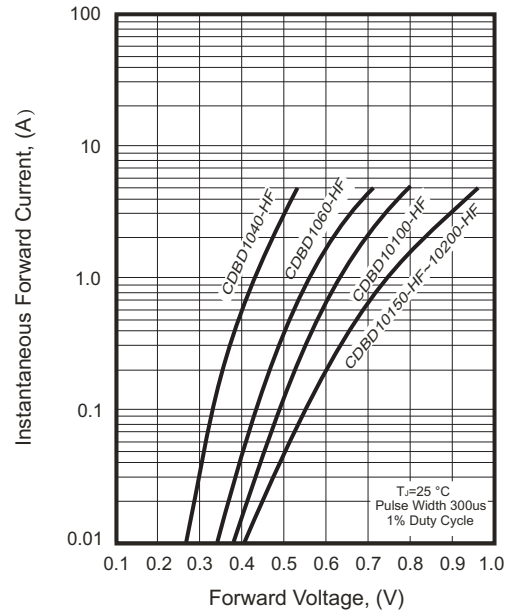


FIG.3- Maximum Non-Repetitive Forward Surge Current

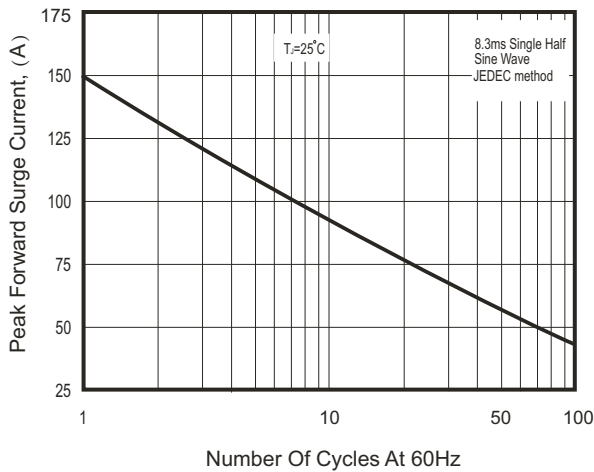
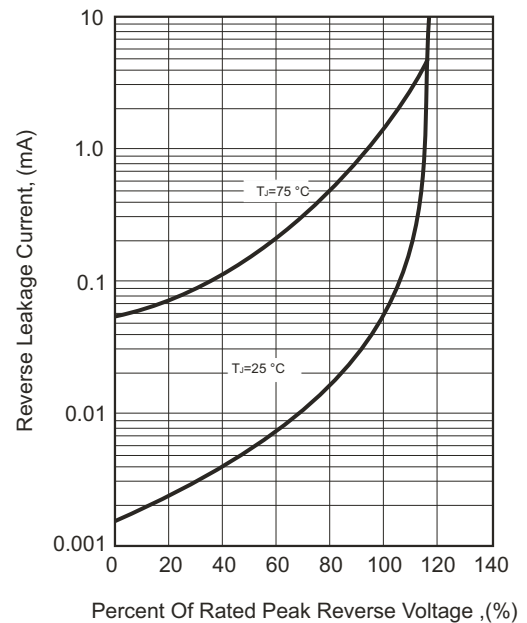
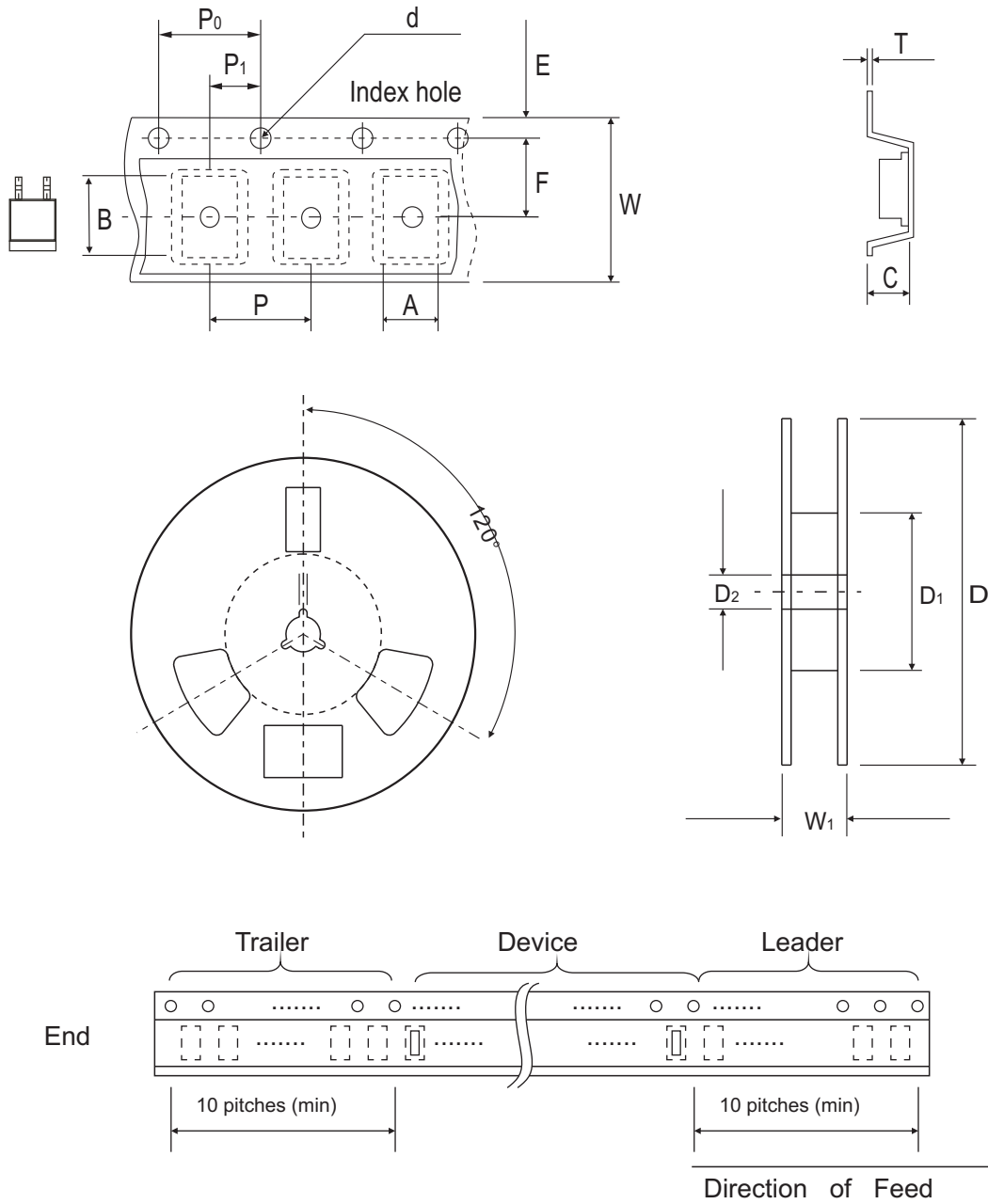


FIG.4 - Typical Reverse Characteristics



## Reel Taping Specification

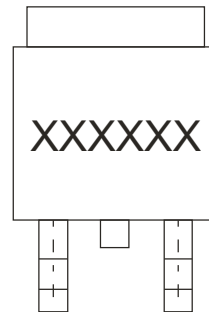


TO-263/D2PAK	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	10.70 ± 0.10	16.30 ± 0.10	5.10 ± 0.10	1.50 ± 0.10	330.00 ± 2.00	50.0 MIN.	13.0 ± 0.50
	(inch)	0.421 ± 0.004	0.642 ± 0.004	0.201 ± 0.004	0.059 ± 0.004	13.00 ± 0.079	1.969 MIN.	0.512 ± 0.020

TO-263/D2PAK	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	11.50 ± 0.10	16.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.10	24.00 ± 0.30	30.00 ± 1.0
	(inch)	0.069 ± 0.004	0.453 ± 0.004	0.630 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.004	0.945 ± 0.012	1.181 ± 0.039

## Marking Code

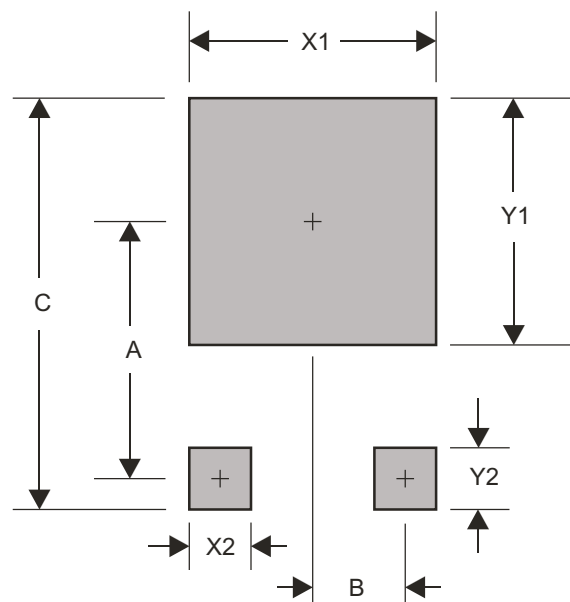
Part Number	Marking Code
CDBD1040-HF	SK1040
CDBD1060-HF	SK1060
CDBD10100-HF	SK10100
CDBD10150-HF	SK10150
CDBD10200-HF	SK10200



XXXXXX / XXXXXXXX = Product type marking code

## Suggested PAD Layout

SIZE	TO-263 / D2PAK	
	(mm)	(inch)
A	9.50	0.374
B	2.50	0.098
C	16.90	0.665
X1	10.80	0.425
X2	1.80	0.071
Y1	11.40	0.449
Y2	3.50	0.138



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
TO-263/D2PAK	800	13