

## CDBD2040-HF Thru. CDBD20200-HF

Reverse Voltage: 40 to 200 Volts

Forward Current: 20.0 Amp

RoHS Device

Halogen Free

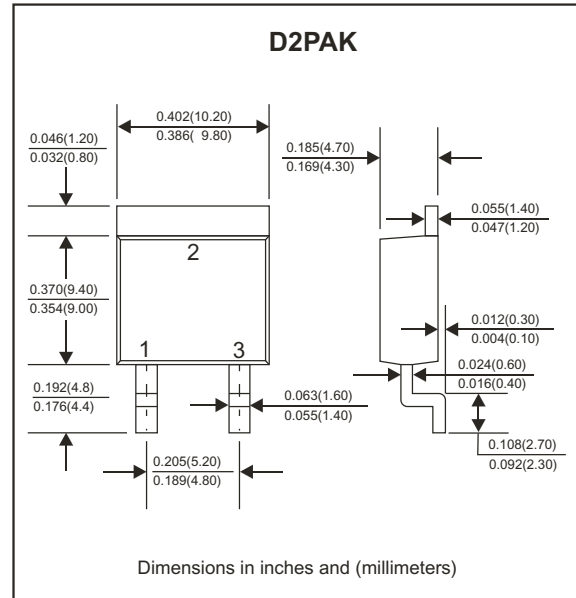


### Features

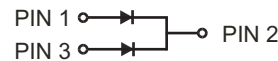
- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guard ring for overvoltage protection.
- Ultra high-speed switching.
- Silicon 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 2040-HF	CDBD 2045-HF	CDBD 2060-HF	CDBD 20100-HF	CDBD 20150-HF	CDBD 20200-HF	Unit
Repetitive peak reverse voltage	$V_{RRM}$	40	45	60	100	150	200	V
Continuous reverse voltage	$V_R$	40	45	60	100	150	200	V
RMS voltage	$V_{RMS}$	28	31.5	42	70	105	140	V
Maximum Forward rectified current (See fig. 1)	$I_O$	20.0						A
Maximum forward voltage $I_F=10.0A$	$V_F$	0.55	0.75	0.85	1.00		V	
Maxium forward surge current, 8.3ms singlehalf sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$	150						A
Maximum reverse current	$V_R=V_{RRM}$ $T_A=25^{\circ}C$	0.5						mA
	$V_R=V_{RRM}$ $T_A=100^{\circ}C$	50						mA
Typical thermal resistance	Junction to Case	2.0						$^{\circ}C/W$
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 (CDBD2040-HF Thru. CDBD20200-HF)

FIG.1- Typical Forward Current De-rating Curve

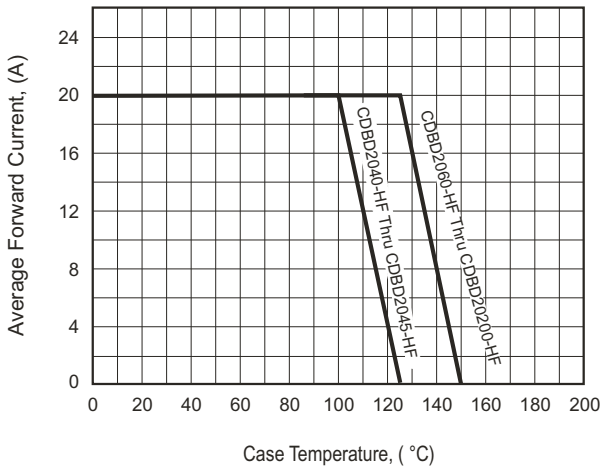


FIG.2- Typical Forward Characteristics

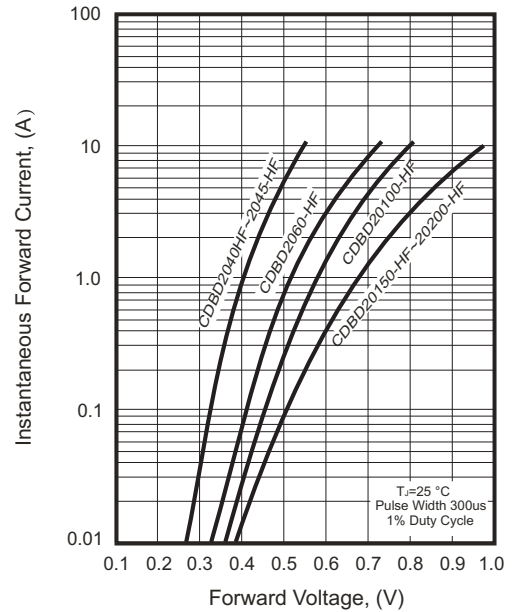


FIG.3- Maximum Non-Repetitive Forward Surge Current

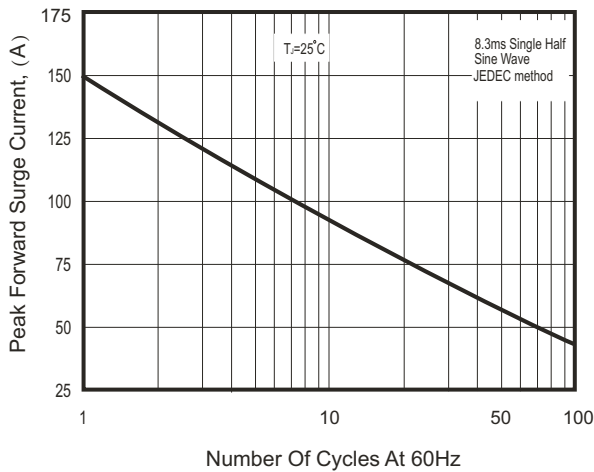
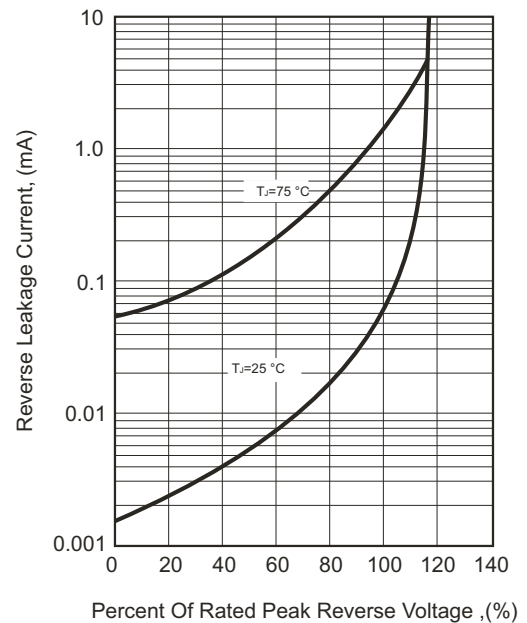
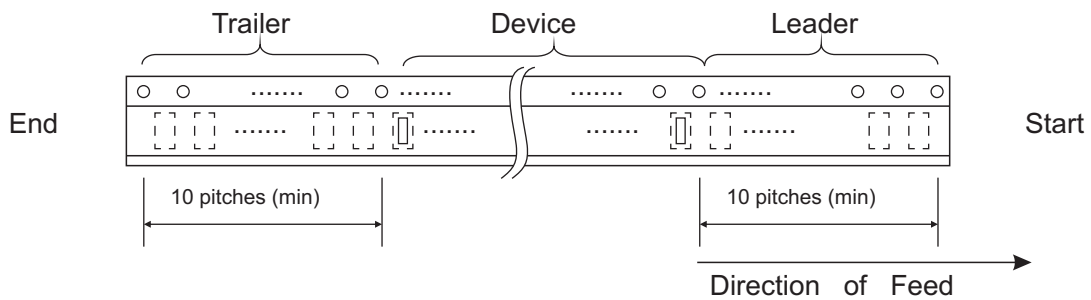
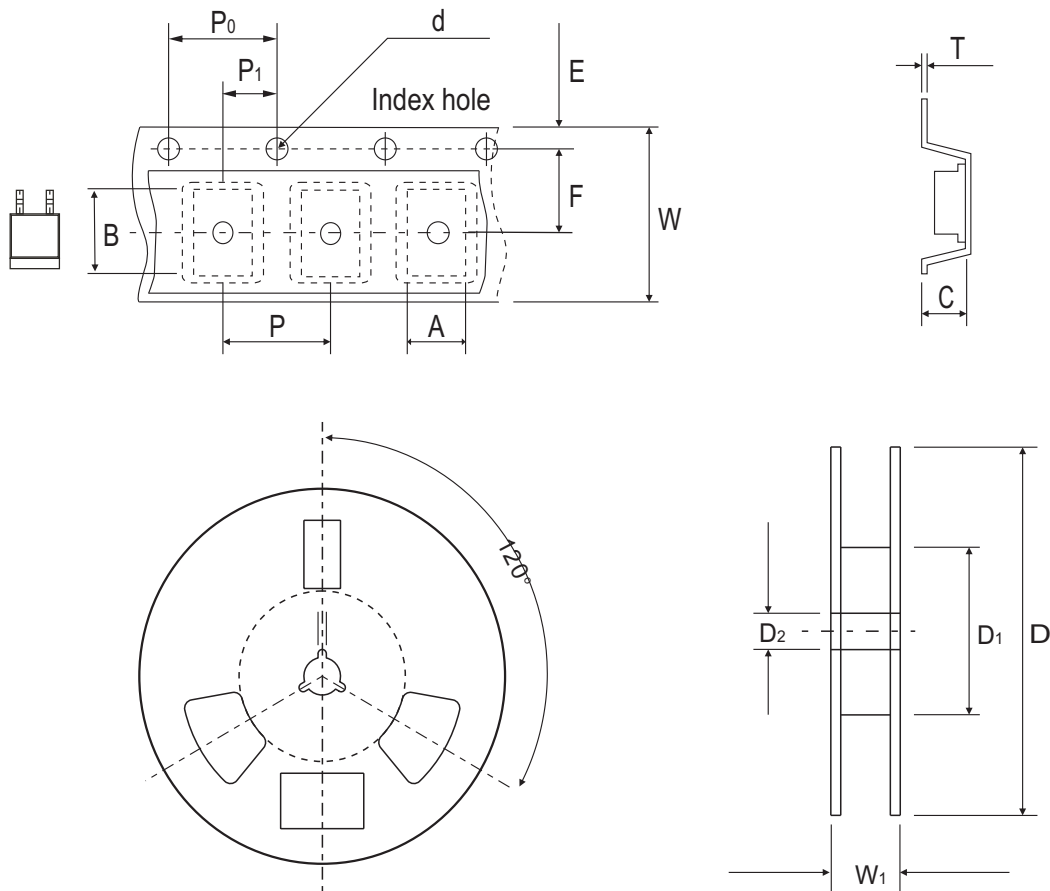


FIG.4 - Typical Reverse Characteristics



## Reel Taping Specification

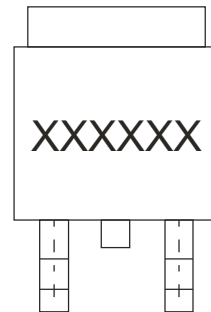


TO-263/D2PAK	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	10.70 ± 0.10	16.30 ± 0.10	5.10 ± 0.10	1.50 ± 0.10	330.00 ± 2.00	50.0 MIN.	13.0 ± 0.50
	(inch)	0.421 ± 0.004	0.642 ± 0.004	0.201 ± 0.004	0.059 ± 0.004	13.00 ± 0.079	1.969 MIN.	0.512 ± 0.020

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

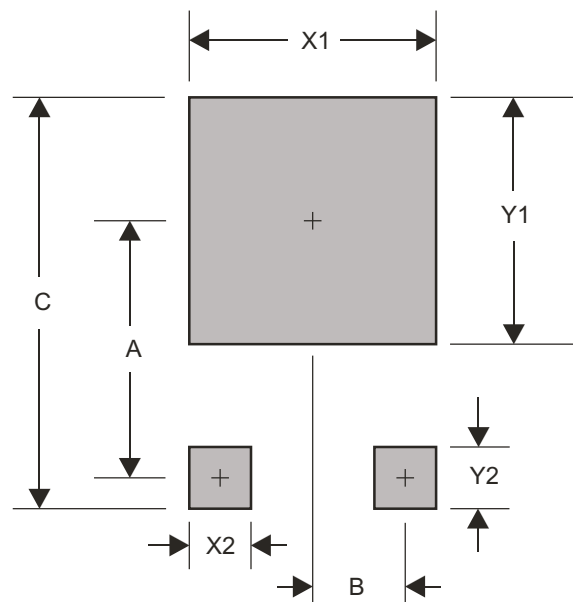
Part Number	Marking Code
CDBD2040-HF	SK2040
CDBD2045-HF	SK2045
CDBD2060-HF	SK2060
CDBD20100-HF	SK20100
CDBD20150-HF	SK20150
CDBD20200-HF	SK20200



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	Qty per Reel	Reel Size
	(Pcs)	(inch)
TO-263 / D2PAK	800	13