

CDBD2-4060L-HF

Reverse Voltage: 60 V

Forward Current: 40 A

RoHS Device

Halogen Free

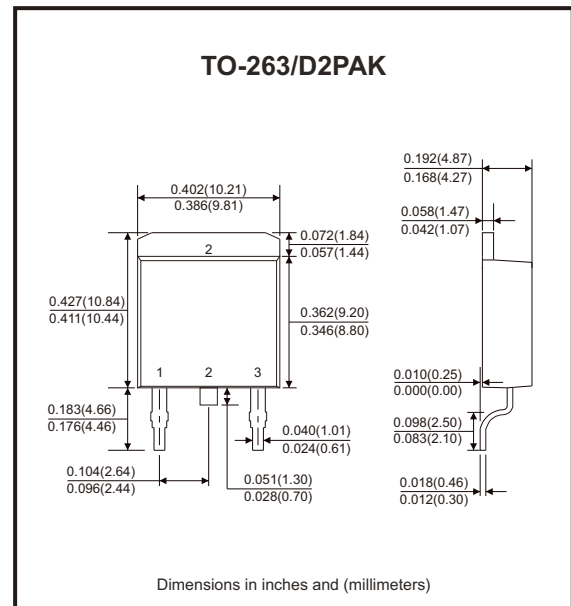


Features

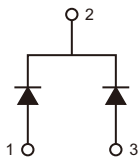
- Ultra low forward voltage drop.
- Excellent high temperature stability.
- Patented super barrier rectifier technology.
- Soft, fast switching capability.

Mechanical data

- Case: TO-263/D2PAK, molded plastic.
- Terminals: Matte tin finish annealed over copper leadframe.
- Polarity: As marked.
- Mounting position: Any.



Circuit Diagram



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

Parameter	Symbol	Value	Unit
Max. recurrent peak reverse voltage	V_{RRM}	60	V
Max. RMS voltage	V_{RMS}	42	V
Max. DC blocking voltage	V_{DC}	60	V
Max. average forward current	$I_{F(AV)}$	40 20	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	250	A
Max. forward voltage at 20A	V_F	0.6	V
Max. DC reverse current at rated DC blocking voltage	I_R	200	μA
Typical junction capacitance ($V_R=4V$, $f=1MHz$)	C_J	650	pF
Typical thermal resistance (Note 1)	$R_{\theta JC}$	2	$^{\circ}C/W$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^{\circ}C$

Notes: 1. Measured on infinite heatsink.

Electrical Characteristics (at $T_A=25^\circ\text{C}$, unless otherwise specified)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage	$I_R = 1\text{mA}$	V_{BR}	60			V
Instantaneous forward voltage per diode	$I_F = 5\text{A}, T_J = 25^\circ\text{C}$	V_F		0.40		V
	$I_F = 10\text{A}, T_J = 25^\circ\text{C}$			0.45		
	$I_F = 20\text{A}, T_J = 25^\circ\text{C}$			0.55	0.60	
	$I_F = 5\text{A}, T_J = 125^\circ\text{C}$	V_F		0.30		V
	$I_F = 10\text{A}, T_J = 125^\circ\text{C}$			0.38		
	$I_F = 20\text{A}, T_J = 125^\circ\text{C}$			0.48		
Reverse current per diode	$V_R = 42\text{V}$	I_R		112		μA
	$V_R = 60\text{V}, T_J = 25^\circ\text{C}$				200	μA
	$V_R = 60\text{V}, T_J = 125^\circ\text{C}$			120		mA

Rating and Characteristics Curves (CDBD2-4060L-HF)

Fig.1 - Forward Current Derating Curve

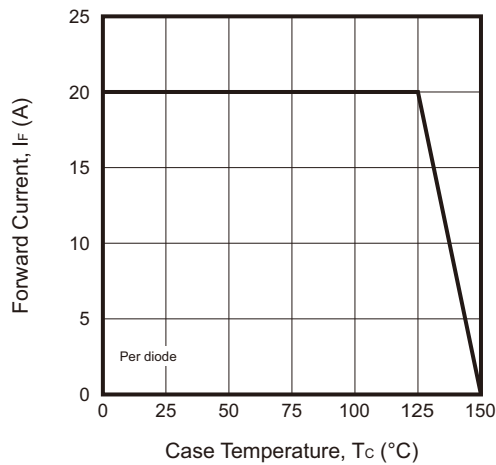


Fig.2 - Typical Junction Capacitance

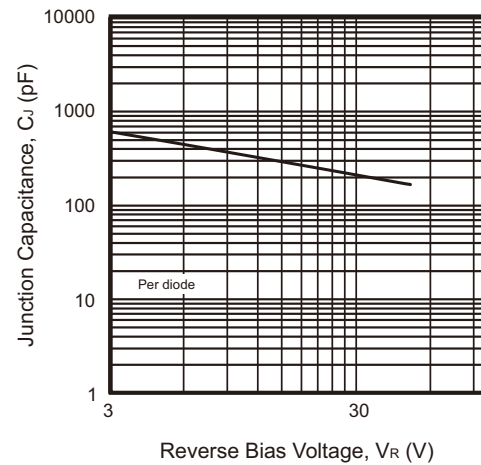


Fig.3 - Typical Reverse Characteristics

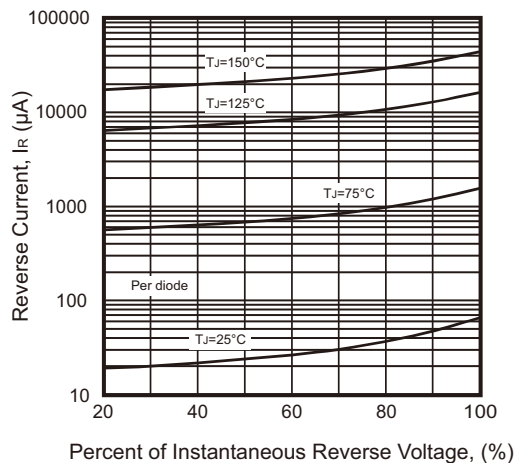
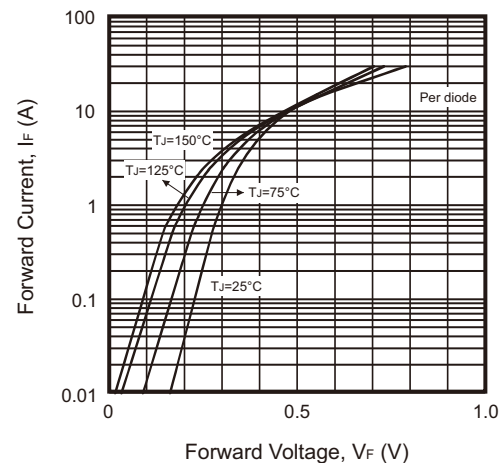
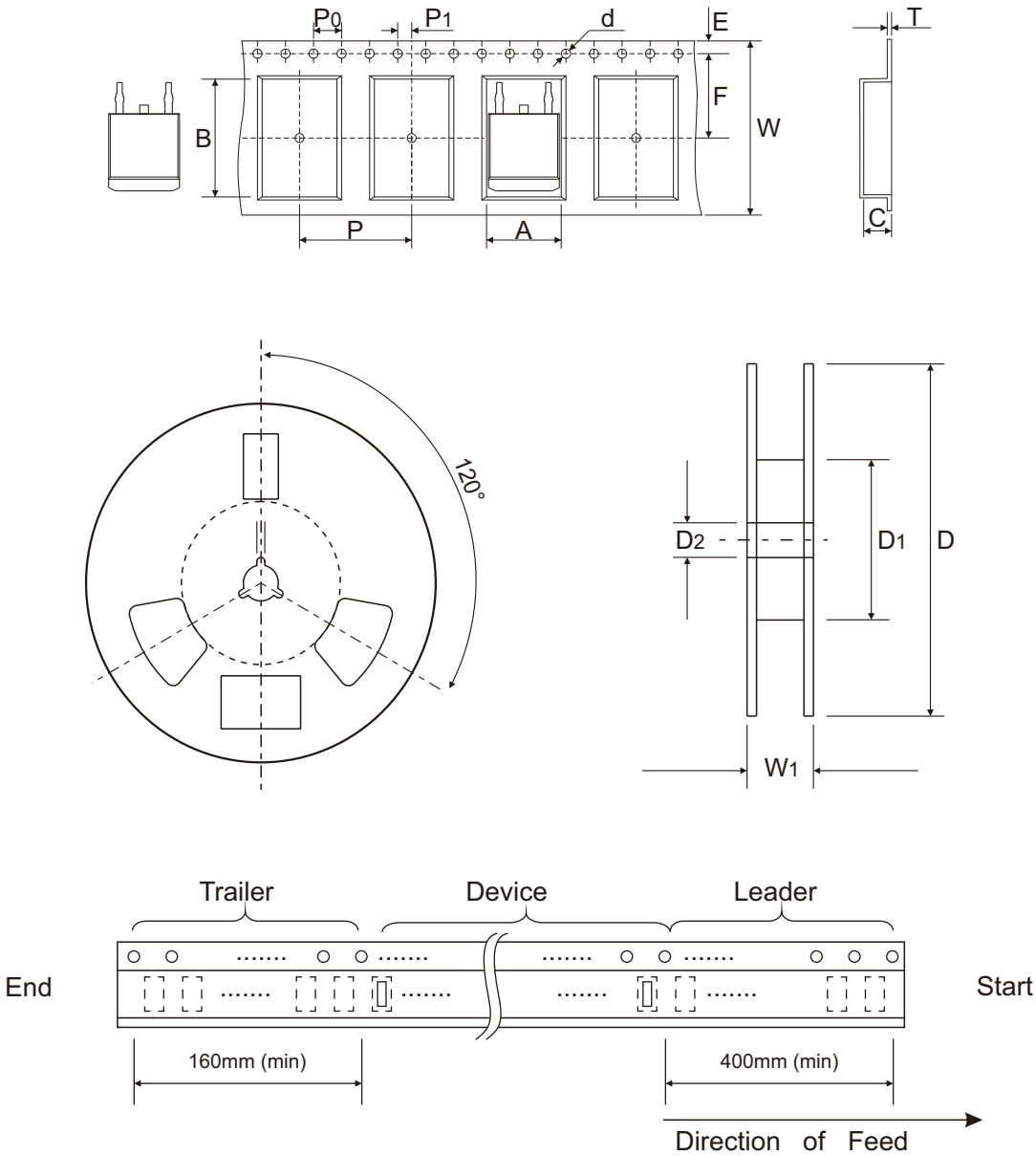


Fig.4 - Typical Forward Characteristics



Reel Taping Specification

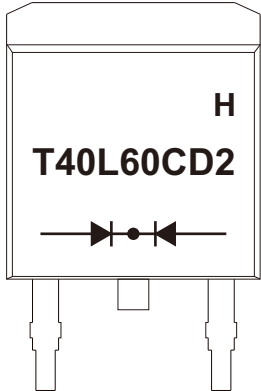


TO-263 /D2PAK	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	10.80 ± 0.10	16.13 ± 0.10	5.21 ± 0.10	1.55 ± 0.05	330 ± 1.00	100 + 0.50	14.00 + 0.50
	(inch)	0.425 ± 0.004	0.635 ± 0.004	0.205 ± 0.004	0.061 ± 0.002	12.992 ± 0.039	3.937 + 0.020	0.551 + 0.020

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	0.356 ± 0.013	24.00 + 0.30 - 0.10	28.50 + 0.50
	(inch)	0.069 ± 0.004	0.453 ± 0.004	0.630 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.014 ± 0.001	0.945 + 0.012 - 0.004	1.122 + 0.020

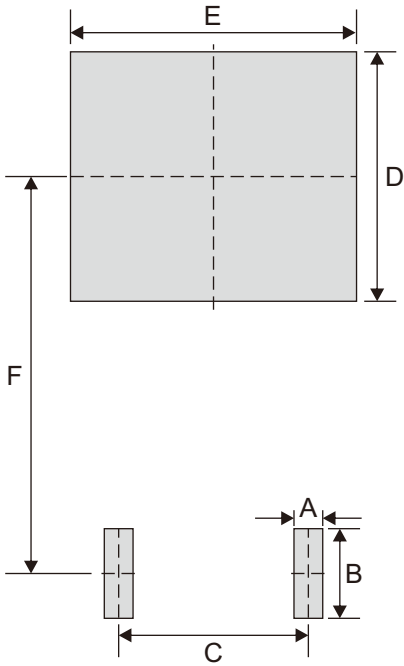
Marking Code

Part Number	Marking Code
CDBD2-4060L-HF	T40L60CD2



Suggested P.C.B. PAD Layout

SIZE	TO-263/D2PAK	
	(mm)	(inch)
A	0.77	0.030
B	2.40	0.094
C	5.08	0.200
D	6.68	0.263
E	7.66	0.302
F	10.63	0.419



Standard Packaging

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