

## CDSPB40K-HF

Reverse Voltage: 800 Volts

Forward Current: 4.0 A

RoHS Device

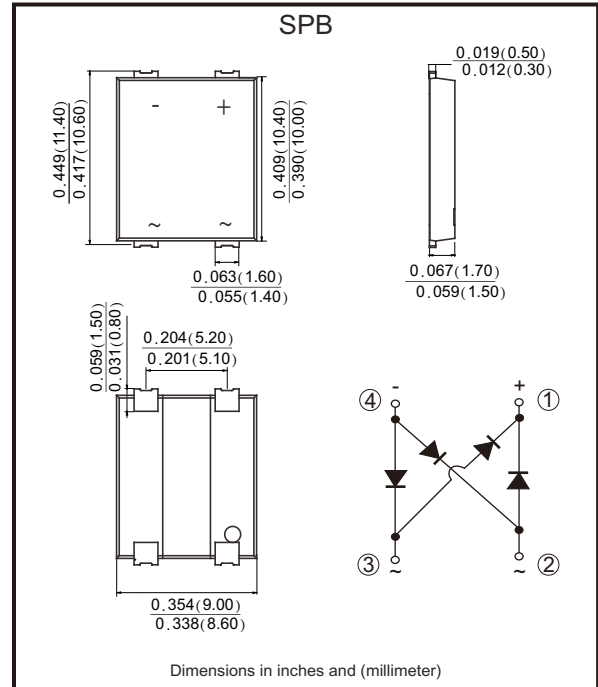
Halogen Free

### Features

- Planar passivated chips.
- Ultra low leakage reverse current.
- High temperature performance.
- High surge current capability.
- Ideal for printed circuit boards.
- High temperature soldering guaranteed: 260°C/10 seconds.

### Mechanical data

- Case: SPB molded plastic.
- Molding compound, UL flammability classification rating 94V-0.
- Terminals: Leads solderable per MIL-STD-750,
- Mounting position: Any.



### Maximum Ratings (@ Ta=25 °C unless otherwise specified)

Characteristic	Symbol	CDSPB40K-HF	Units
Peak repetitive reverse voltage	$V_{RRM}$	800	V
RMS reverse voltage	$V_{RMS}$	560	V
DC blocking voltage	$V_{DC}$	800	V
Maximum average forward output current	$I_{F(AV)}$	4.0	A
Peak forward surge current, 8.3ms single half-sine-wave	@T <sub>J</sub> =25°C $I_{FSM}$	135	A
I <sup>2</sup> rating for fusing	@T <sub>J</sub> =25°C $I_t^2$	76	A <sup>2</sup> s

### Thermal Characteristics

Characteristic	Symbol	CDSPB40K-HF	Units
Typical thermal resistance perleg (Note 1)	$R_{\theta JA}$	38	°C/W
	$R_{\theta JC}$	10.4	
	$R_{\theta JL}$	7.5	
Operating junction temperature range	$T_J$	-55 ~ +150	°C
Storage temperature range	$T_{STG}$	-55 ~ +150	°C

Note: 1. Device mounted on PCB with 10mm x 20mm x 0.1mm copper pad areas.

## Electrical Characteristics (@ Ta=25 °C unless otherwise specified)

Parameter	Symbol	Test conditions		Typ.	Max.	Units
Max. instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> = 2.0A Per diode		0.91	0.95	V
		I <sub>F</sub> = 4.0A Per diode		0.95	1.0	
Max. reverse current	I <sub>R</sub>	Rated V <sub>R</sub> , Per diode	@T <sub>J</sub> =25°C	0.5	1.0	μA
			@T <sub>J</sub> =150°C	40	100	

Rating and Characteristic Curves (@ Ta=25 °C unless otherwise noted)

Fig.1 - Forward Current Derating Curve

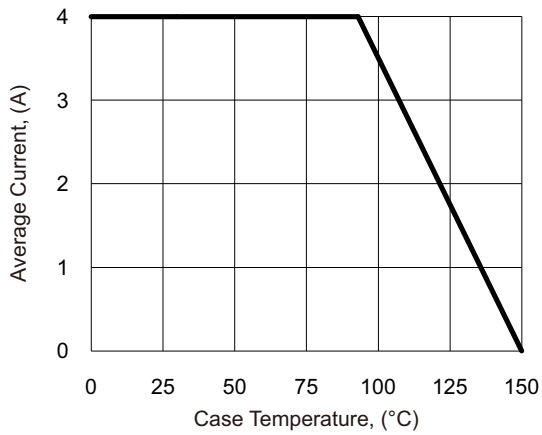


Fig.2 - Surge Current Derating Curve

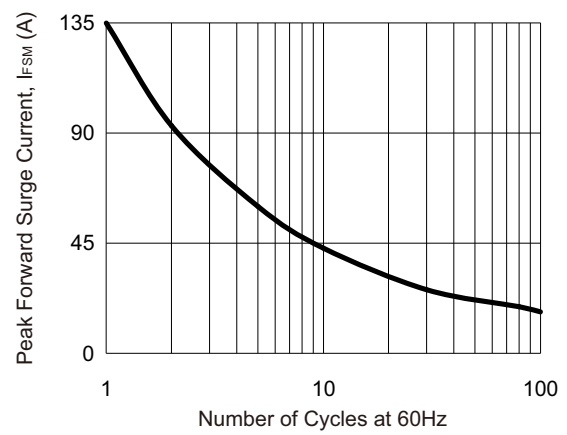


Fig.3 - Typical Forward Voltage Characteristic

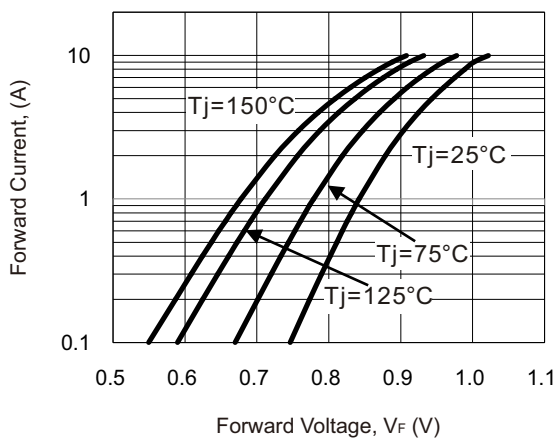
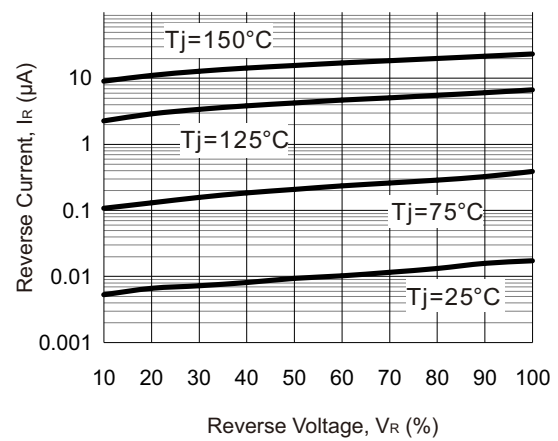
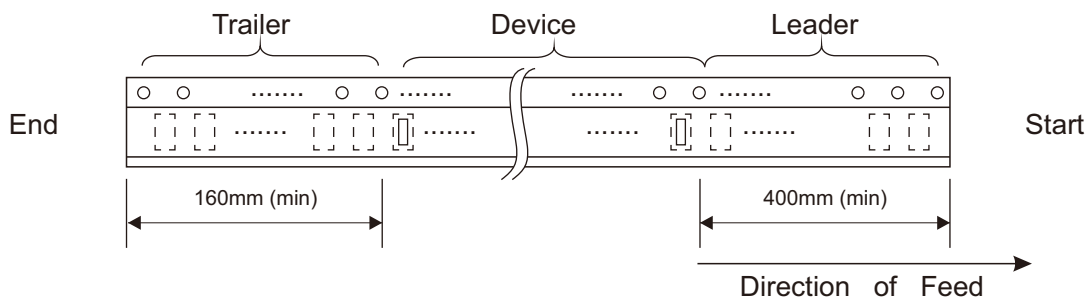
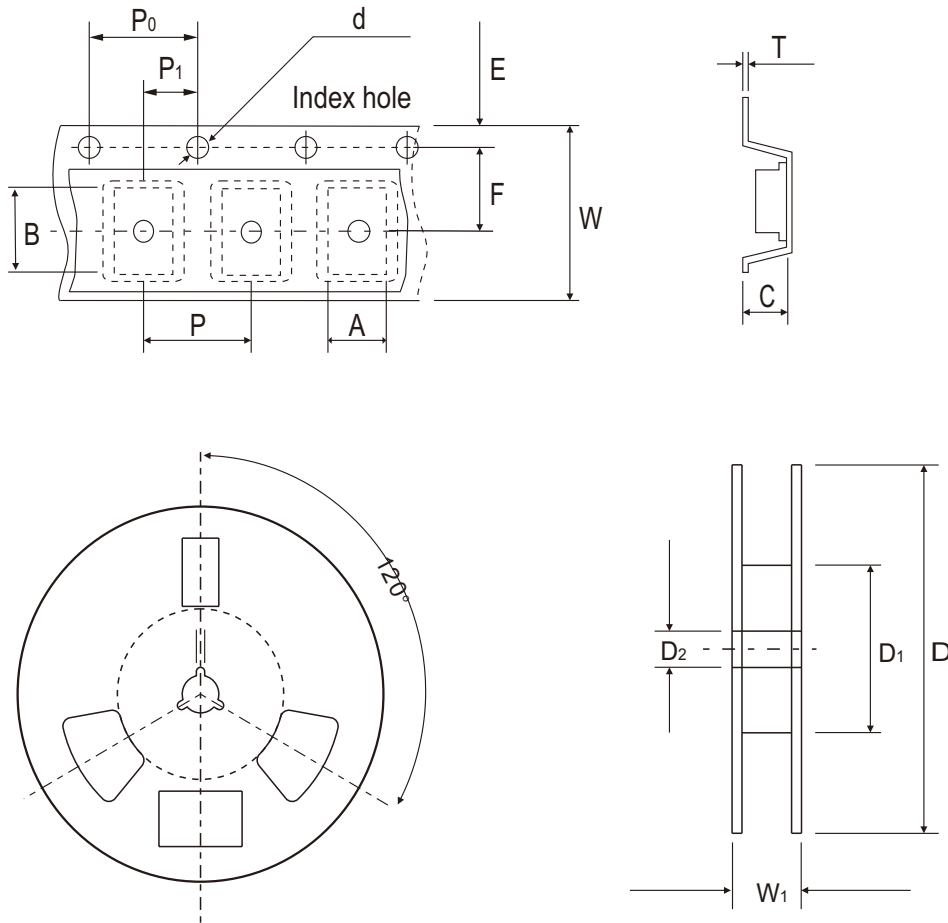


Fig.4 - Typical Reverse Characteristic



## Reel Taping Specification



SPB	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	8.64 ± 0.10	10.41 ± 0.10	3.81 ± 0.10	1.55 ± 0.05	330	50.0 MIN.	13.00 ± 0.20
	(inch)	0.340 ± 0.004	0.409 ± 0.004	0.150 ± 0.004	0.061 ± 0.002	13	1.969 MIN.	0.512 ± 0.008

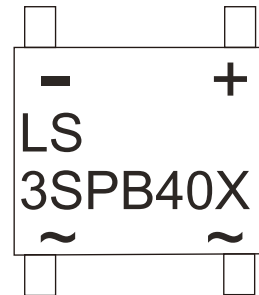
SPB	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	7.50 ± 0.05	12.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.32	16.00 ± 0.30	16.00~18.40
	(inch)	0.069 ± 0.004	0.295 ± 0.002	0.472 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.013	0.630 ± 0.012	0.630~0.724

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

REV:B

## Marking Code

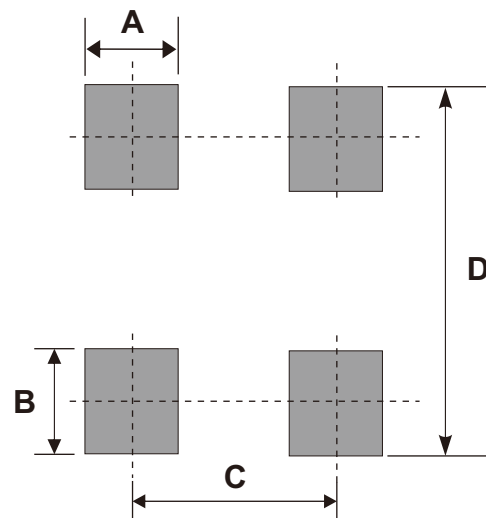
Part Number	Marking code
CDSPB40K-HF	3SPB40K



X = Product type marking code

## Suggested PAD Layout

SIZE	SPB	
	(mm)	(inch)
A	1.80	0.070
B	1.80	0.070
C	5.20	0.204
D	11.6	0.456



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
SPB	1,500	13