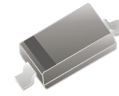


## CDSV-19-HF/-20-HF/-21-HF

RoHS Device

Halogen Free



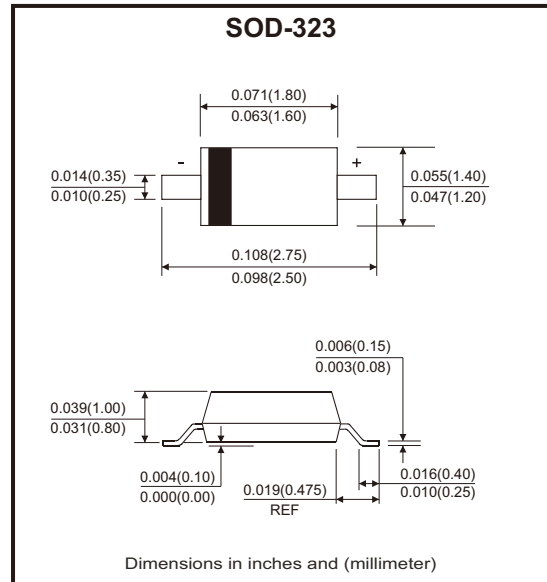
### Features

- Low reverse current.
- Surface mount package ideally suited for automatic insertion.
- Fast switching speed.
- For general purpose switching applications.

### Mechanical Data

- Case: SOD-323, molded plastic.
- Polarity: Indicated by cathode end.
- Mounting position: Any.

### Circuit Diagram



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

Parameter	Symbol	CDSV-19-HF	CDSV-20-HF	CDSV-21-HF	Unit
Non-repetitive peak reverse voltage	$V_{RM}$	120	200	250	V
Peak repetitive reverse voltage	$V_{RRM}$	100	150	200	V
Working peak reverse voltage	$V_{RWM}$				
RMS reverse voltage	$V_{R(RMS)}$	71	106	141	V
Average rectified output current	$I_O$	200			mA
Non-repetitive peak forward surge current @t=8.3ms	$I_{FSM}$	2.0			A
Repetitive peak forward surge current	$I_{FRM}$	625			mA
Power dissipation	$P_D$	250			mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	500			°C/W
Operation junction and storage temperature range	$T_J, T_{STG}$	-55 to +150			°C

### Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current	$I_R$	$V_R = 100V$ $V_R = 150V$ $V_R = 200V$			0.1 0.1 0.1	$\mu A$
Forward voltage	$V_F$	$I_F = 100mA$ $I_F = 200mA$			1 1.25	V
Total capacitance	$C_{tot}$	$V_R = 0V, f = 1MHz$			5	pF
Reverse recovery time	$t_{rr}$	$I_F = I_R = 30mA, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$			50	ns

## Rating and Characteristic Curves (CDSV-19-HF/-20-HF/-21-HF)

Fig.1 - Forward Characteristics

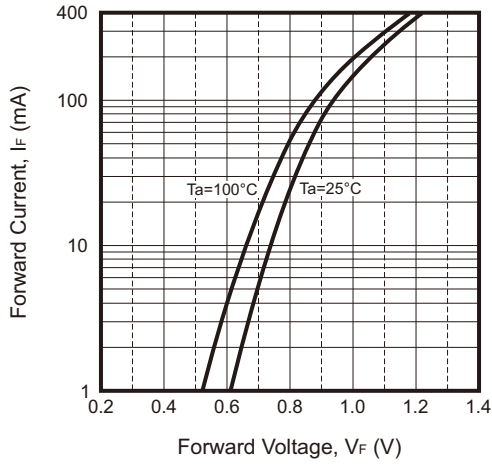


Fig.2 - Reverse Characteristics

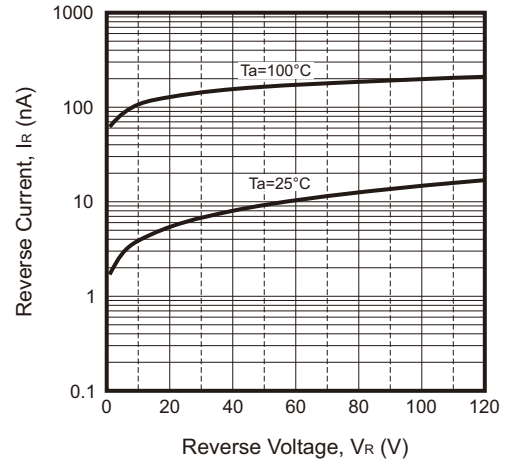


Fig.3 - Capacitance Characteristics

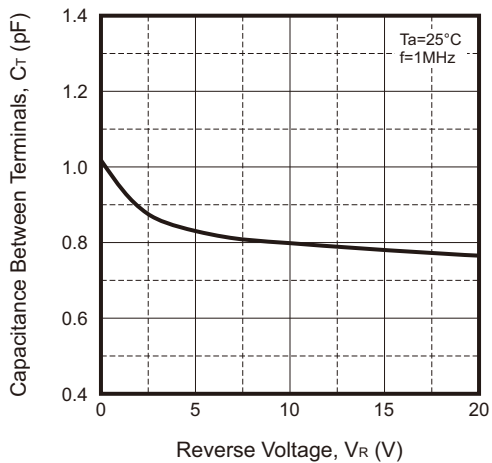
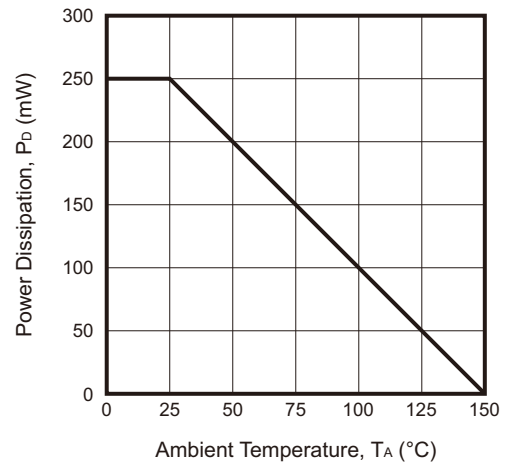
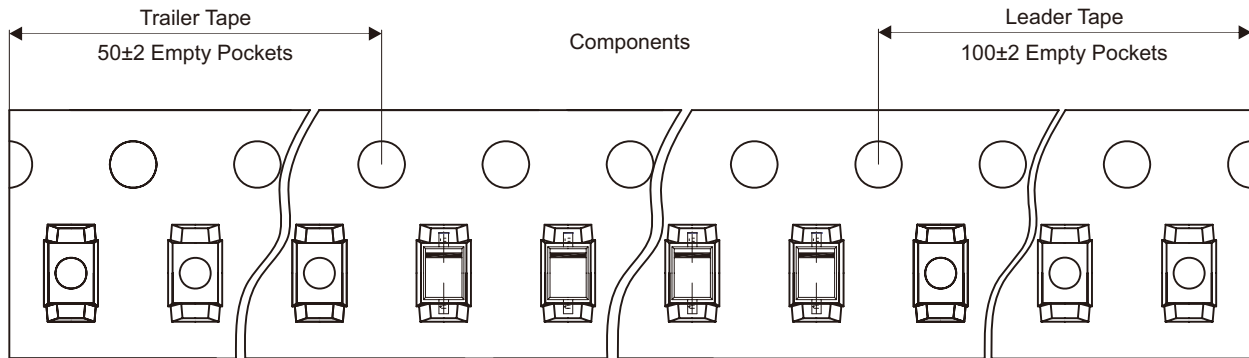
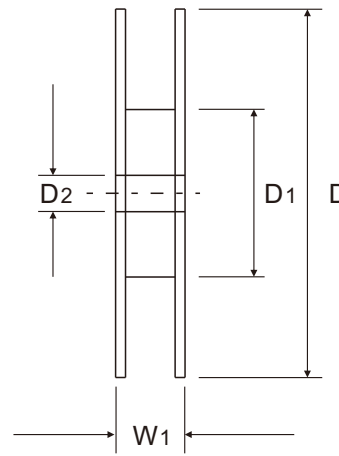
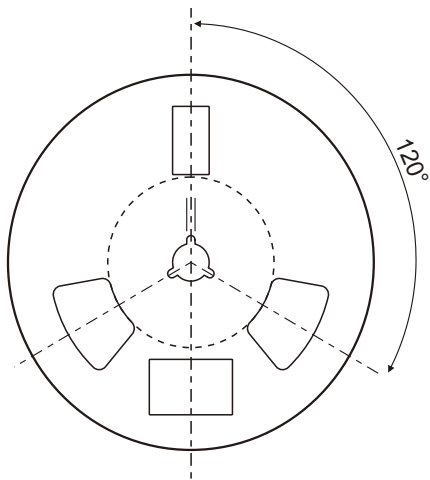
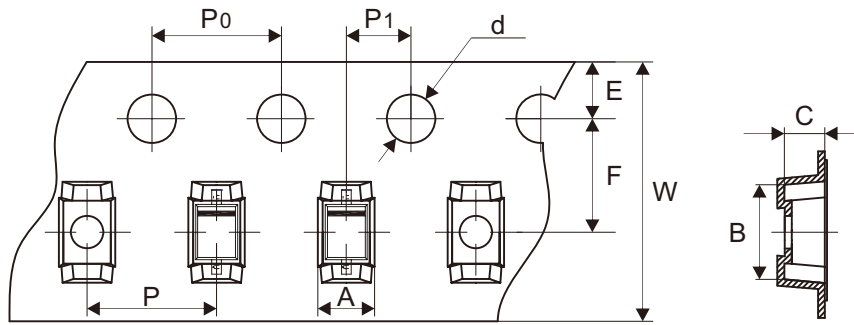


Fig.4 - Power Derating Curve



## Reel Taping Specification



SOD-323	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	$1.48 \pm 0.05$	$3.30 \pm 0.05$	$1.25 \pm 0.05$	$1.50 + 0.10$	$178.00 \pm 2.00$	$54.40 \pm 1.00$	$13.00 \pm 1.00$
	(inch)	$0.058 \pm 0.002$	$0.130 \pm 0.002$	$0.049 \pm 0.002$	$0.059 + 0.004$	$7.008 \pm 0.079$	$2.142 \pm 0.039$	$0.512 \pm 0.039$

SOD-323	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	$1.75 \pm 0.10$	$3.50 \pm 0.10$	$4.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.10$	$8.00 + 0.30 - 0.10$	$12.30 \pm 1.00$
	(inch)	$0.069 \pm 0.004$	$0.138 \pm 0.004$	$0.157 \pm 0.004$	$0.157 \pm 0.004$	$0.079 \pm 0.004$	$0.315 + 0.012 - 0.004$	$0.484 \pm 0.039$

## Marking Code

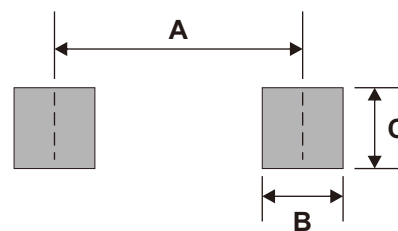
Part Number	Marking Code
CDSV-19-HF	A8
CDSV-20-HF	T2
CDSV-21-HF	T3



**█** = Cathode band  
 Solid dot = Control code  
 xx = Product type marking code

## Suggested P.C.B. PAD Layout

SIZE	SOD-323	
	(mm)	(inch)
<b>A</b>	2.15	0.085
<b>B</b>	0.70	0.028
<b>C</b>	0.70	0.028



## Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-323	3,000	7