

## CDSFR101A-HF

$I_o = 100 \text{ mA}$

$V_R = 80 \text{ V}$

RoHS Device

Halogen Free

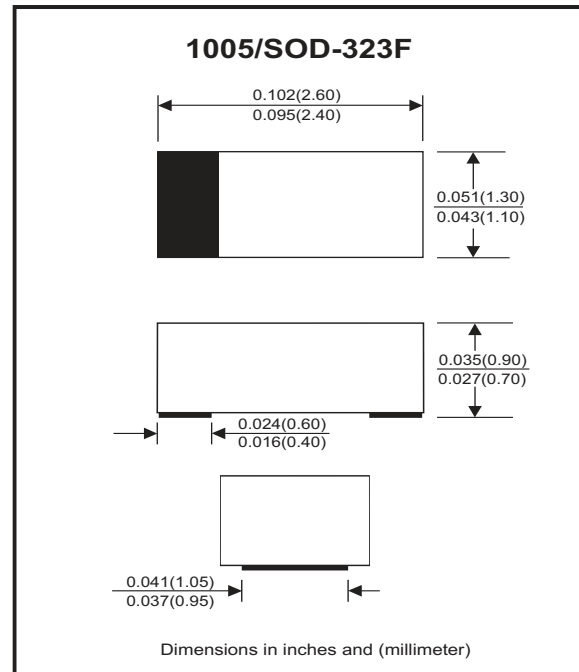


### Features

- High Speed.
- Designed for mounting on small surface.
- Extremely thin/leadless package.
- Low leakage current (<50nA).
- High mounting capability, strong surge withstand, high reliability.

### Mechanical data

- Case: 1005/SOD-323F standard package, molded plastic.
- Terminals: Gold plated, Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.
- Weight: 0.006 grams (approx.).



### Circuit diagram



### Maximum Rating (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Repetitive peak reverse voltage		$V_{RRM}$			90	V
Reverse voltage		$V_R$			80	V
Average forward current		$I_o$			100	mA
Forward current, surge peak	8.3 ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$		1000		mA
Power dissipation		$P_d$			330	mW
Thermal resistance	Junction to ambient	$R_{\theta JA}$			300	$^\circ\text{C/W}$
Operating temperature range		$T_j$	-40		+125	$^\circ\text{C}$
Storage temperature range		$T_{STG}$	-55		+125	$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 100 \text{ mA DC}$	$V_F$			1.0	V
Reverse current	$V_R = 75 \text{ V}$	$I_R$			50	nA
Capacitance between terminals	$f = 1 \text{ MHz}$ , and $0.5 \text{ V DC}$ reverse voltage	$C_T$		3		pF
Reverse recovery time	$V_R = 6 \text{ V}$ , $I_F = 10 \text{ mA}$ , $R_L = 50 \text{ ohms}$	$T_{rr}$		4		nS

## RATING AND CHARACTERISTIC CURVES (CDSFR101A-HF)

Fig.1 - Forward Characteristics

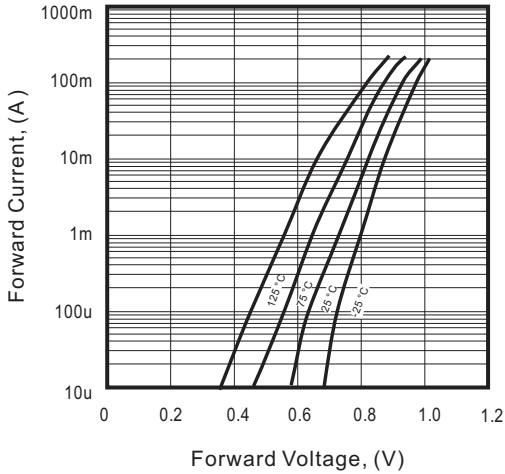


Fig.2 - Reverse Characteristics

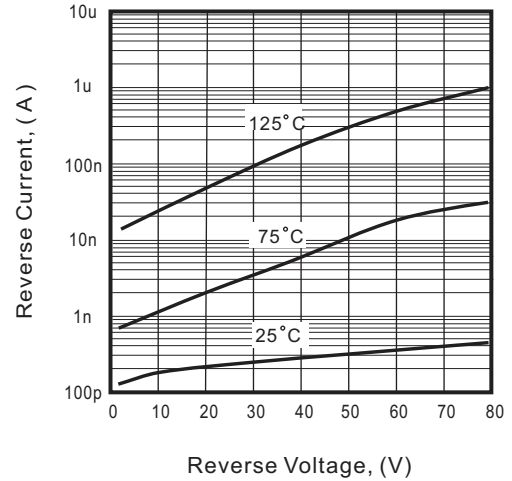


Fig.3 - Capacitance Between Terminals Characteristics

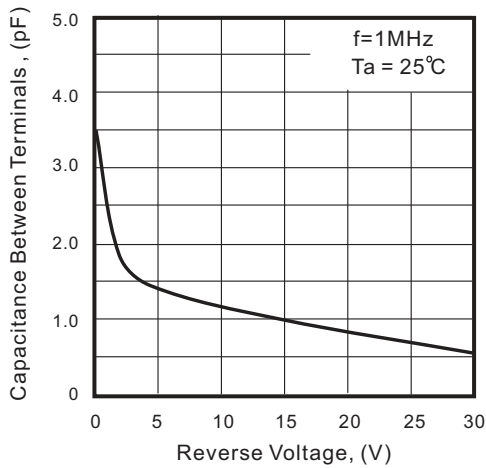
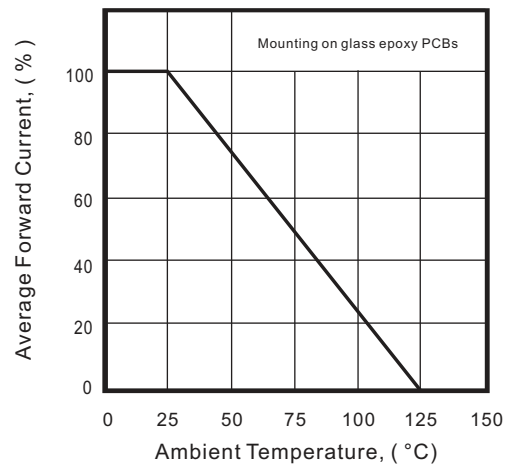
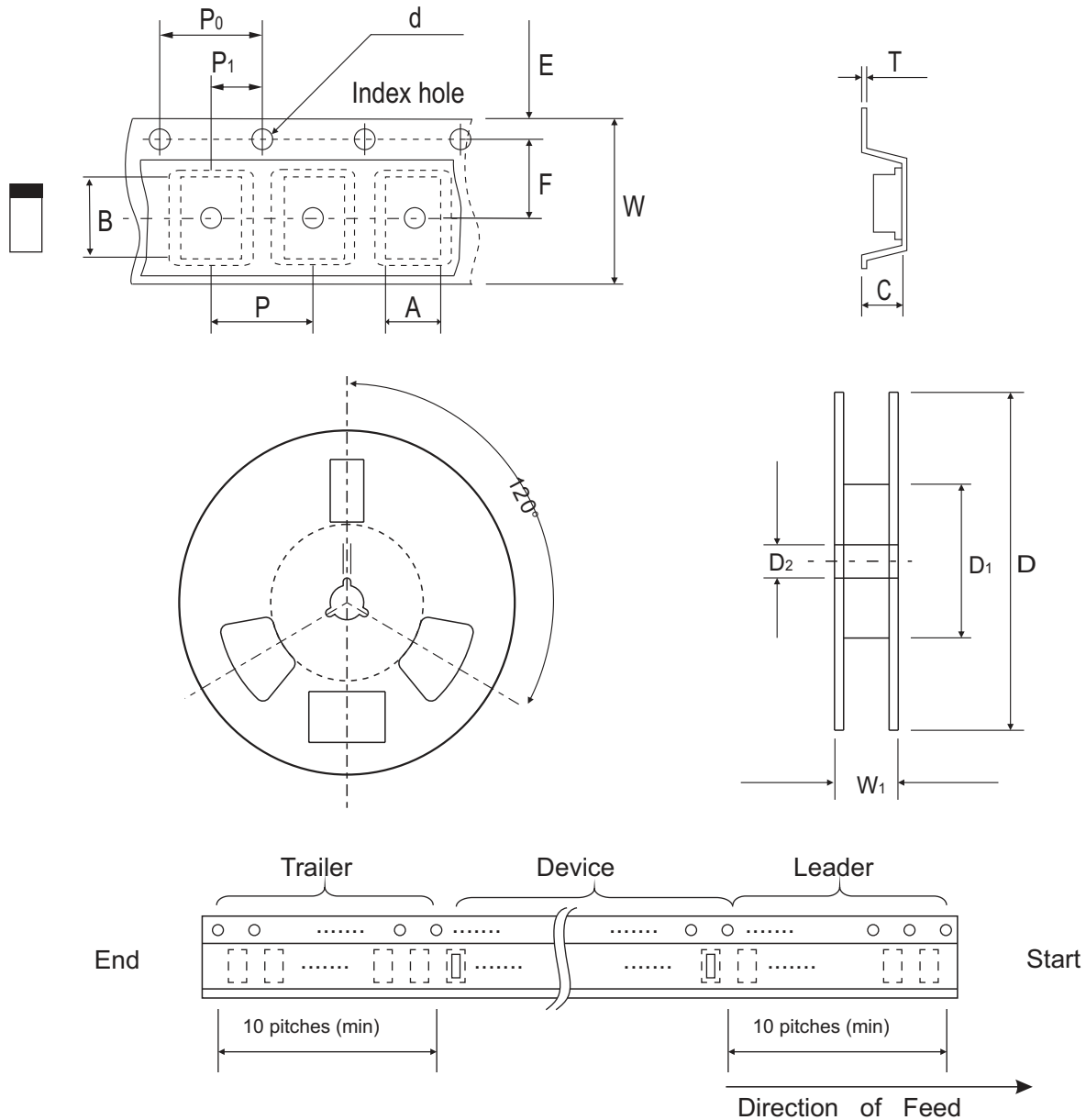


Fig.4 - Current Derating Curve



## Reel Taping Specification



1005 (SOD-323F)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	1.55 ± 0.10	2.65 ± 0.10	1.05 ± 0.10	1.55 ± 0.05	178 ± 1.0	60.0 MIN.	13.00 ± 0.20
	(inch)	0.061 ± 0.004	0.104 ± 0.004	0.041 ± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

1005 (SOD-323F)	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.23 ± 0.05	8.00 ± 0.20	13.5 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.002	0.315 ± 0.008	0.531 MAX.

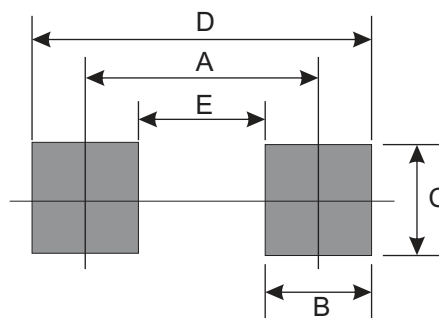
## Marking Code

Part Number	Marking Code
CDSFR101A-HF	S2



## Suggested PAD Layout

SIZE	1005/SOD-323F	
	(mm)	(inch)
A	2.00	0.079
B	0.70	0.028
C	1.30	0.051
D	2.70	0.106
E	1.30	0.051



## Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
1005/SOD-323F	4,000	7