

CDSF4148-HF

RoHS Device
Halogen Free

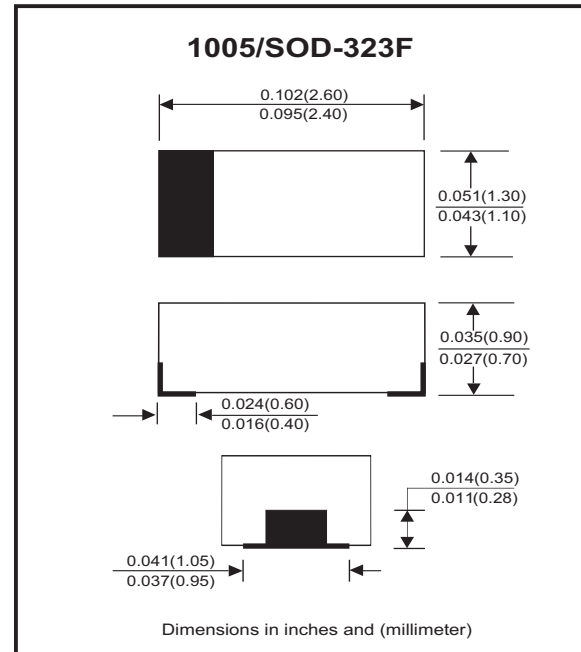


Features

- High Speed.
- Designed for mounting on small surface.
- Extremely thin/leadless package.
- High mounting capability, strong surge withstand, high reliability.
- Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, automotive and telecommunication.

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}			100	V
Reverse voltage		V_R			75	V
Average forward current		I_O			150	mA
Forward current, surge peak	$T_p=1\mu\text{S}$ $T_p=1\text{mS}$	I_{FSM}		4 1		A
Power dissipation		P_D			350	mW
Thermal resistance junction to ambient air		$R_{\theta JA}$			286	$^\circ\text{C/W}$
Operating temperature range		T_J	-40		+125	$^\circ\text{C}$
Storage temperature range		T_{STG}	-40		+125	$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_R = 100\text{ }\mu\text{A}$	V_{BR}	75			V
Forward voltage	$I_F = 50\text{ mA DC}$	V_F			1.0	V
Reverse current	$V_R = 20\text{ V}$ $V_R = 75\text{ V}$	I_R			25 2.5	nA μA
Capacitance between terminals	$f = 1\text{ MHz}$, and 0 VDC reverse voltage	C_T			4	pF
Reverse recovery time	$I_F = I_R = 10\text{ mA}$, $R_L = 100\text{ ohms}$, $I_{rr} = 1\text{ mA}$	T_{rr}			4	nS

RATING AND CHARACTERISTIC CURVES (CDSF4148-HF)

Fig.1 - Forward Characteristics

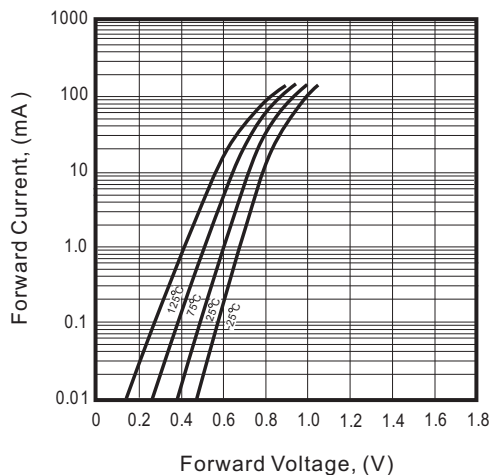


Fig.2 - Reverse Characteristics

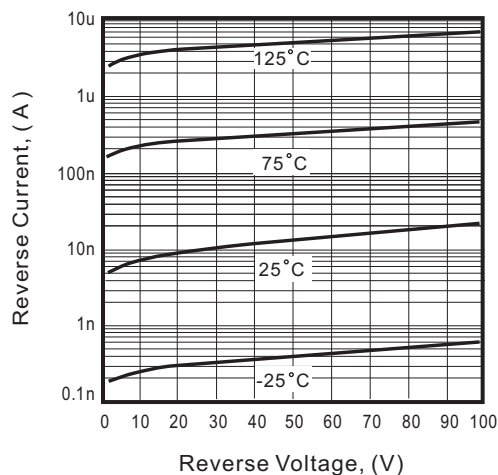


Fig.3 - Capacitance Between Terminals Characteristics

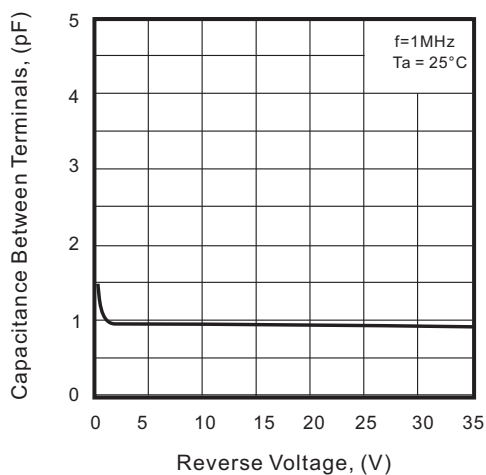
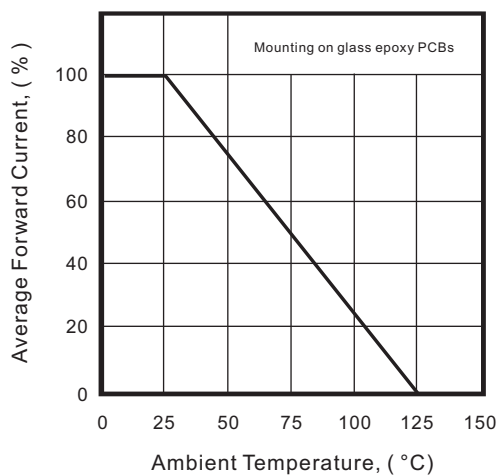
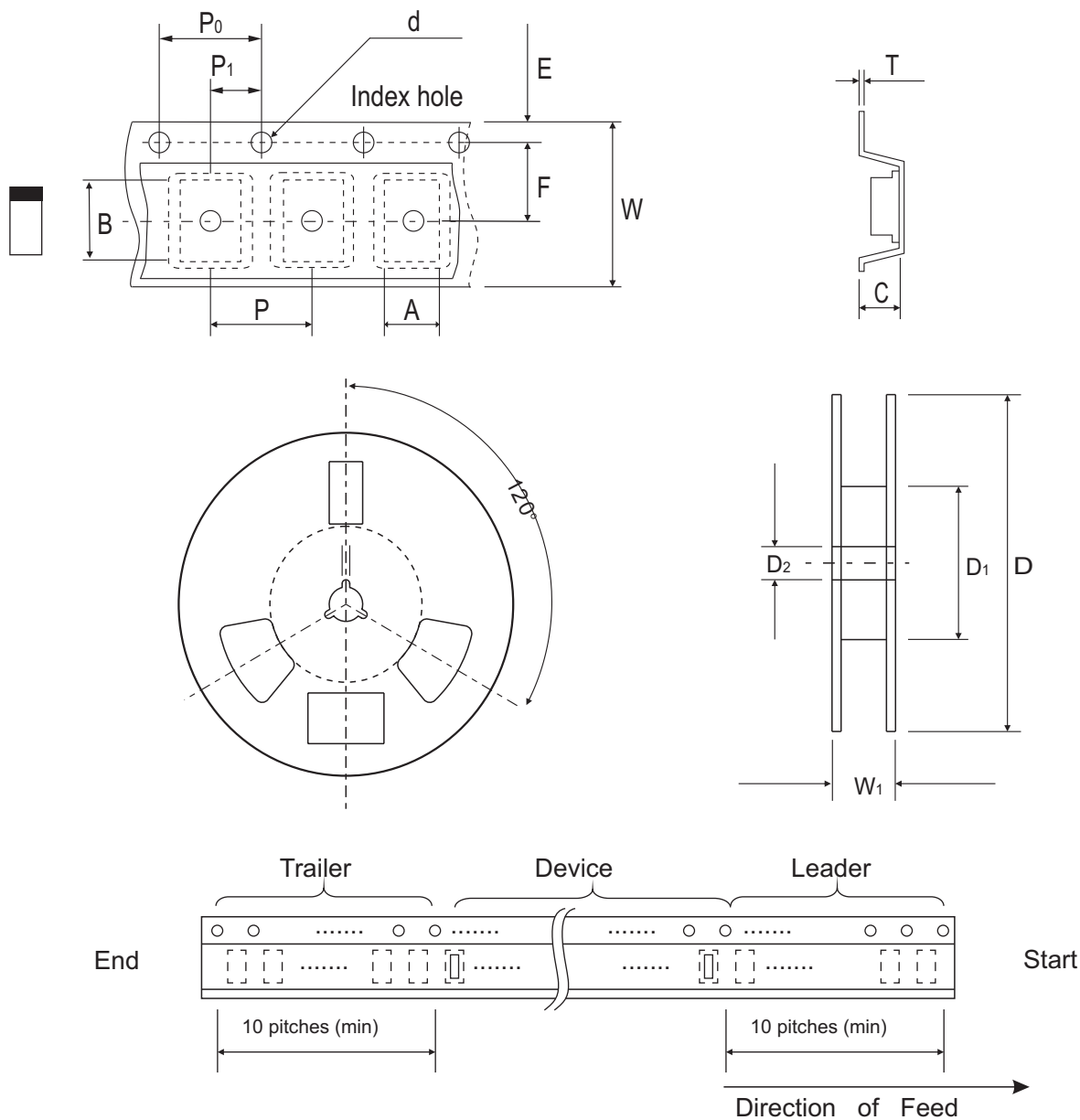


Fig.4 - Current Derating Curve



Reel Taping Specification

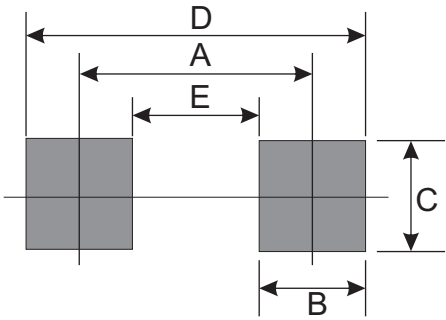


1005 (SOD-323F)	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.55 ± 0.10	2.65 ± 0.10	1.05 ± 0.10	1.55 ± 0.05	178 ± 1.0	60.0 MIN.	13.00 ± 0.20
	(inch)	0.061 ± 0.004	0.104 ± 0.004	0.041 ± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

1005 (SOD-323F)	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(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.

Suggested PAD Layout

SIZE	1005/SOD-323F	
	(mm)	(inch)
A	2.10	0.083
B	1.20	0.047
C	1.20	0.047
D	3.30	0.130
E	0.90	0.035



Standard Packaging

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