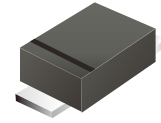


CDBTS140R-HF

RoHS Device
Halogen Free



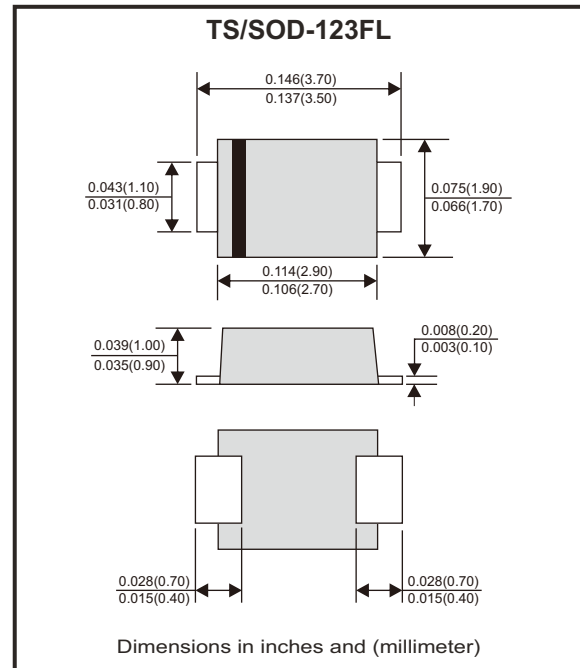
Features

- Low reverse current.
- Low forward voltage.
- Designed for mounting on small surface.

Mechanical data

- Case: SOD-123FL, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.

Circuit Diagram



Maximum Rating (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Repetitive peak reverse voltage		V_{RRM}			40	V
RMS reverse voltage		V_{RMS}			28	V
Reverse voltage		V_R			40	V
Average forward rectified current		I_o			1	A
Forward current, surge peak	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			30	A
Power dissipation		P_D			400	mW
Thermal resistance	Junction to case	$R_{\theta JC}$		51		°C
Junction temperature range		T_j	-55		125	°C
Storage temperature range		T_{STG}	-55		125	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 1A$	V_F			500	mV
Reverse current	$V_R = 40V$	I_R			500	μA
Junction capacitance	$V_R = 0V, f = 1MHz$	C_J		169		pF

Typical Rating and Characteristic Curves (CDBTS140R-HF)

Fig.1 - Forward Characteristics

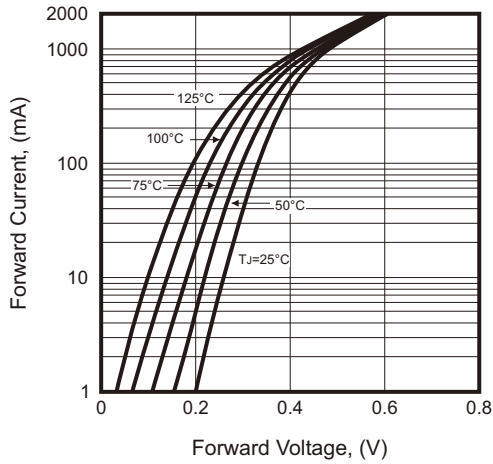


Fig.2 - Reverse Characteristics

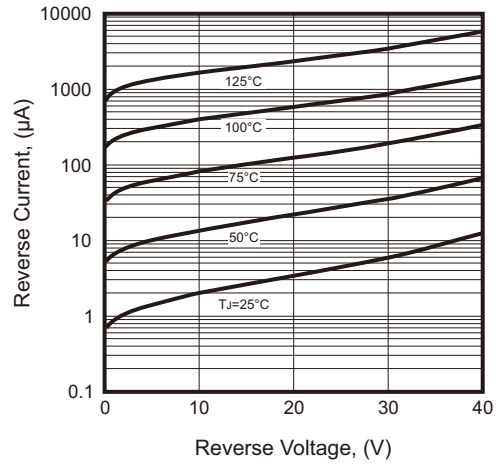


Fig.3 - Typical Capacitance Between Terminals Characteristics

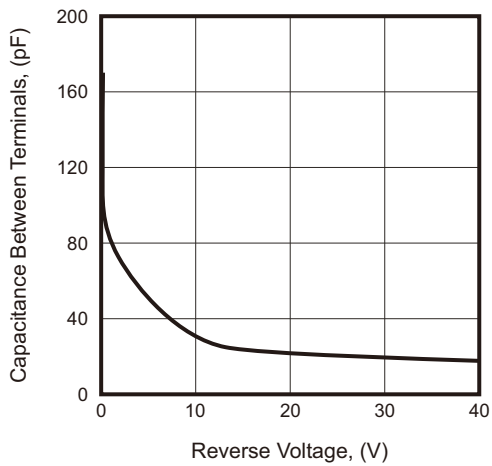
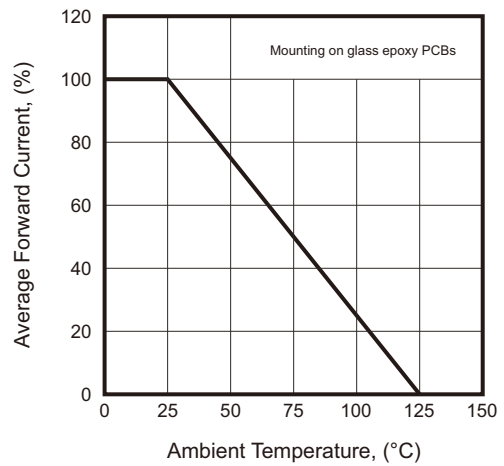
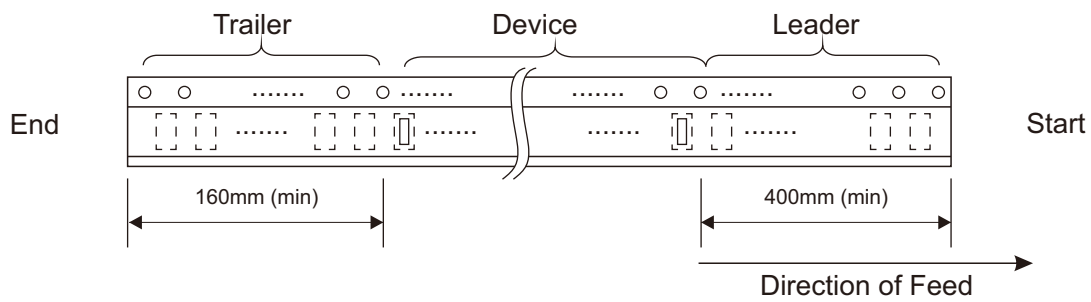
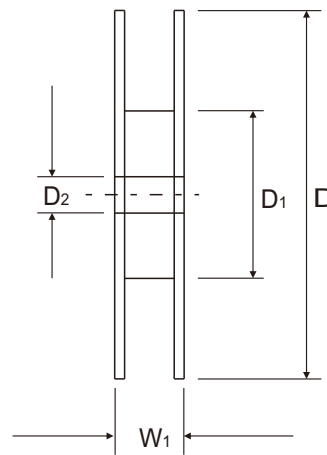
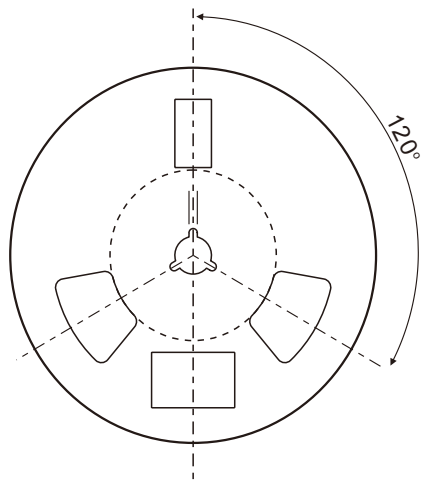
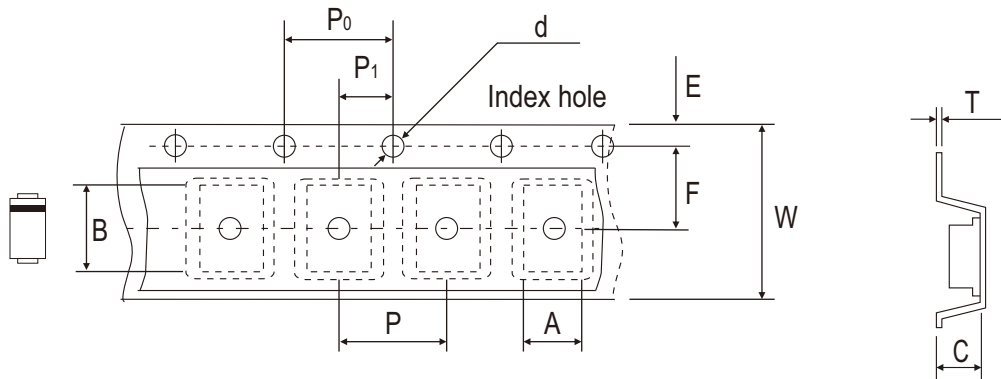


Fig.4 - Current Derating Curves



Reel Taping Specification



TS/SOD-123FL	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	2.05 ± 0.10	3.85 ± 0.10	1.25 ± 0.10	1.55 ± 0.05	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.081 ± 0.004	0.152 ± 0.004	0.049 ± 0.004	0.061 ± 0.002	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

TS/SOD-123FL	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	0.20 ± 0.05	8.00 ± 0.30	12.00 + 0.50 - 0
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.002	0.315 ± 0.012	0.472 + 0.020 - 0

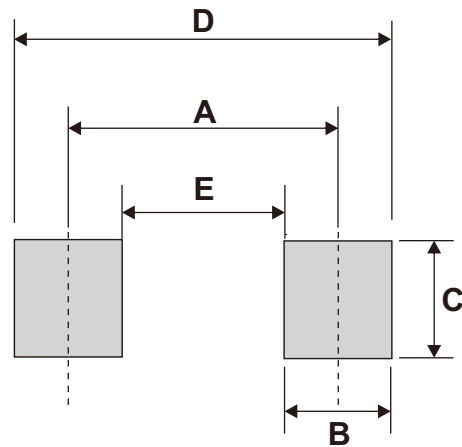
Marking Code

Part Number	Marking Code
CDBTS140R-HF	B04



Suggested P.C.B. PAD Layout

SIZE	TS/SOD-123F	
	(mm)	(inch)
A	3.10	0.122
B	1.15	0.045
C	1.25	0.048
D	4.25	0.167
E	1.95	0.077



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
TS/SOD-123FL	3,000	7