

SMD Schottky Barrier Diode

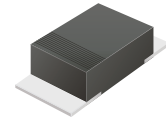


SMD Diodes Specialist

CDBKM140 (RoHS Device)

$I_o = 1A$

$V_R = 40 \text{ Volts}$



Features

Ideal for surface mount applications.

Easy pick and place.

Plastic package has Underwriters Lab. flammability classification 94V-0.

Exceeds environmental standard MIL-S-19500/228.

Low leakage current.

Mechanical data

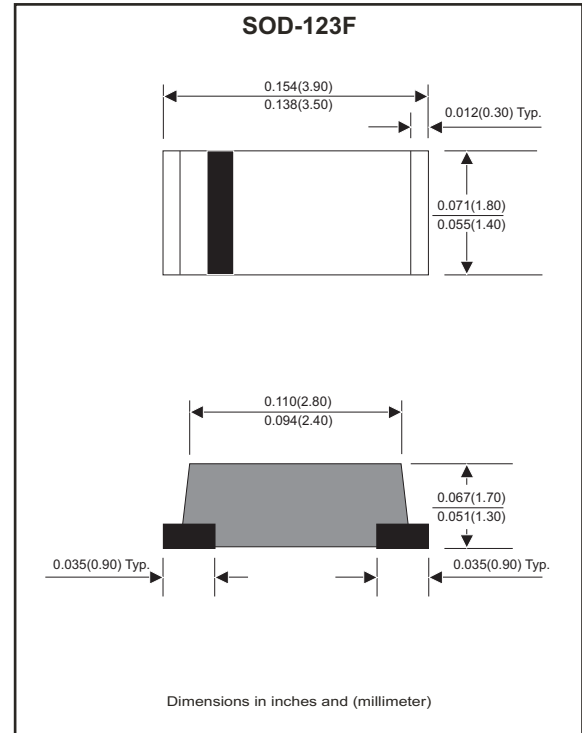
Case: SOD-123F standard package, molded plastic.

Terminals: solderable per MIL-STD-750, method 2026.

Polarity: Indicated by cathode band.

Mounting position: Any

Weight: 0.027 gram(approx.).



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}			40	V
RMS voltage		V_{RMS}			28	V
Reverse voltage		V_R			40	V
Forward rectified current		I_o			1	A
Thermal resistance		$R_{\theta JA}$		98		$^{\circ}\text{C/W}$
Forward surge current	8.3 ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			30	A
Storage temperature		T_{STG}	-55		+150	$^{\circ}\text{C}$
Junction temperature		T_j			+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	$I_F = 1A$	V_F			0.50	V
Reverse current	$V_R = 40V$	I_R			0.1	mA
Capacitance between terminals	$f = 1 \text{ MHz}$, and 4 VDC reverse voltage	C_T		120		pF

Rating and Characteristic Curves (CDBKM140)

Fig.1 Reverse Characteristics

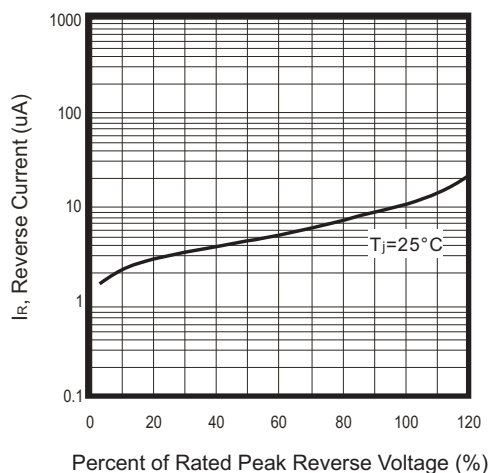


Fig.2 - Forward Characteristics

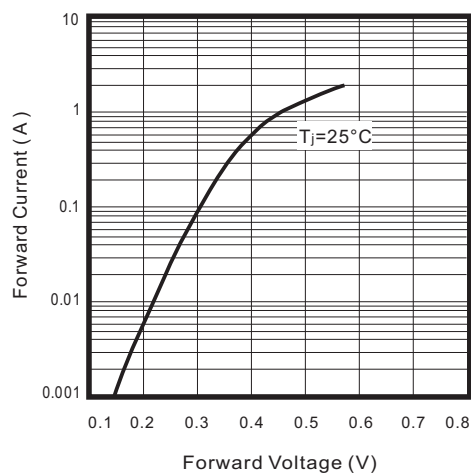


Fig.3 Junction Capacitance

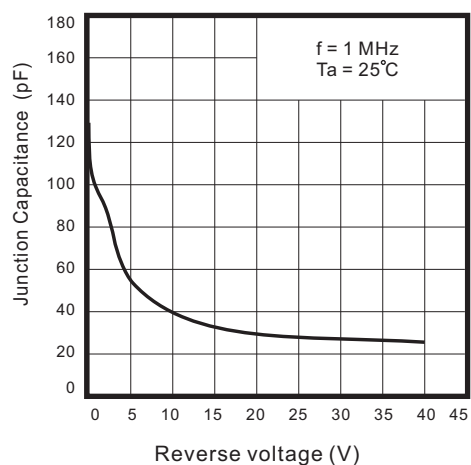


Fig. 4 - Current Derating Curve

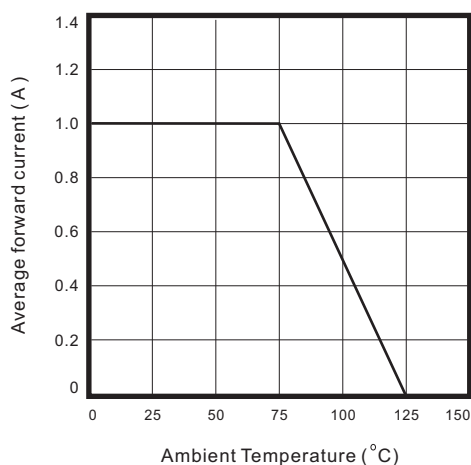
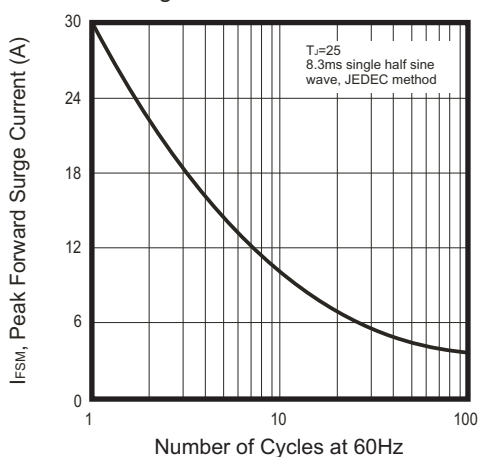
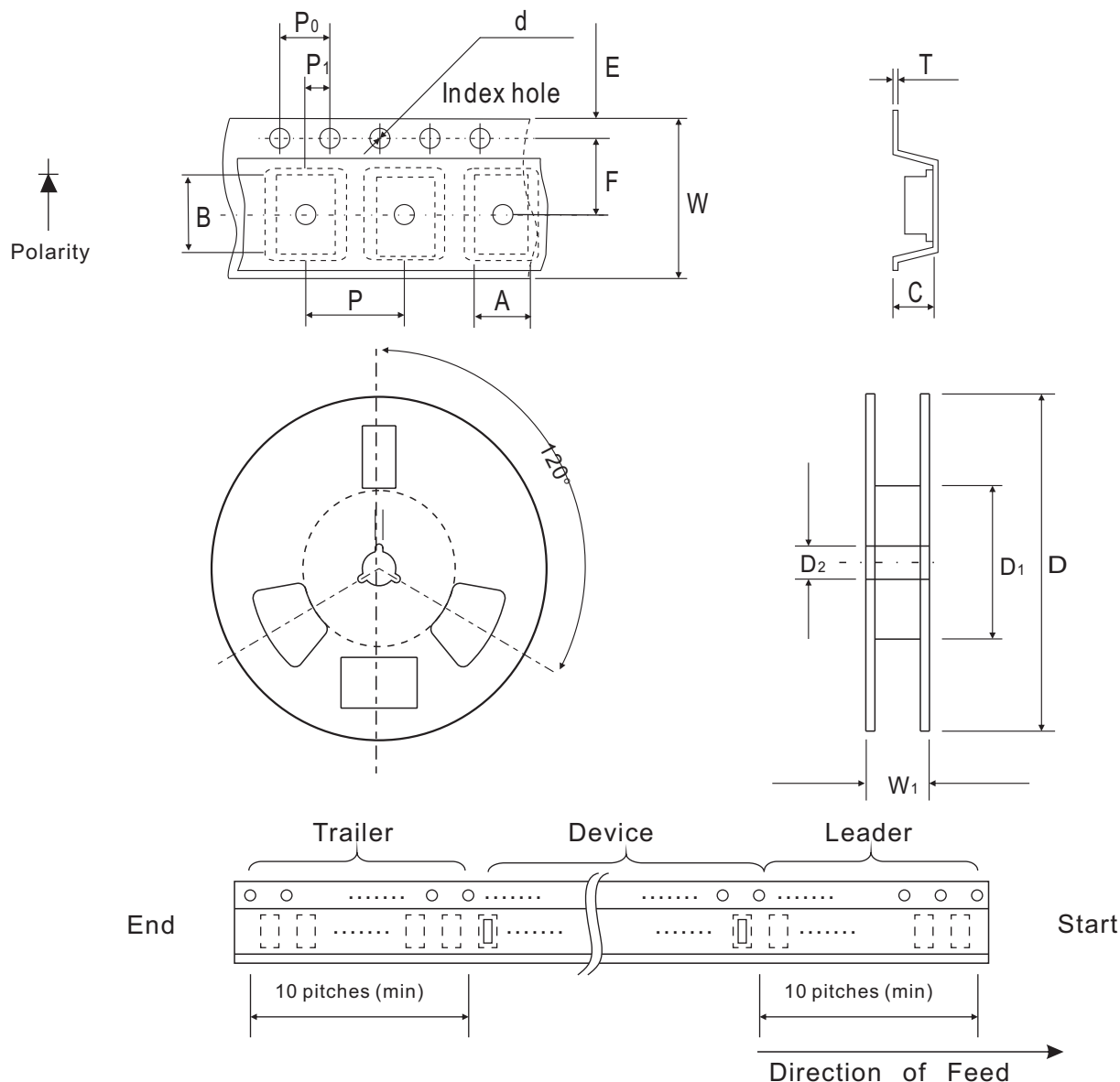


Fig.5 Non-repetitive Forward Surge Current



Reel Taping Specification



KM SOD-123F	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	3.90 ± 0.10	1.90 ± 0.10	1.68 ± 0.10	1.55 ± 0.10	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.154 ± 0.004	0.075 ± 0.004	0.066 ± 0.004	0.061 ± 0.004	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

KM SOD-123F	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	0.22 ± 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 ± 0.004	0.009 ± 0.002	0.315 ± 0.008	0.531 MAX.

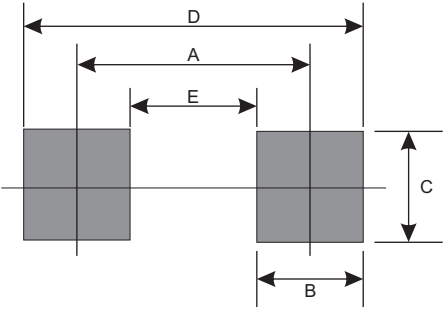
Marking Code

Part Number	Marking Code
CDBKM140	14



Suggested PAD Layout

SIZE	KM/SOD-123F	
	(mm)	(inch)
A	3.30	0.130
B	1.40	0.055
C	1.90	0.075
D	4.70	0.185
E	1.90	0.075



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
KM SOD-123F	2500	7