

DSK14 THRU DSK120



Schottky Barrier Rectifiers

Reverse Voltage: 40 to 200 Volts

Forward Current: 1.0 Ampere

RoHS Device

Halogen Free



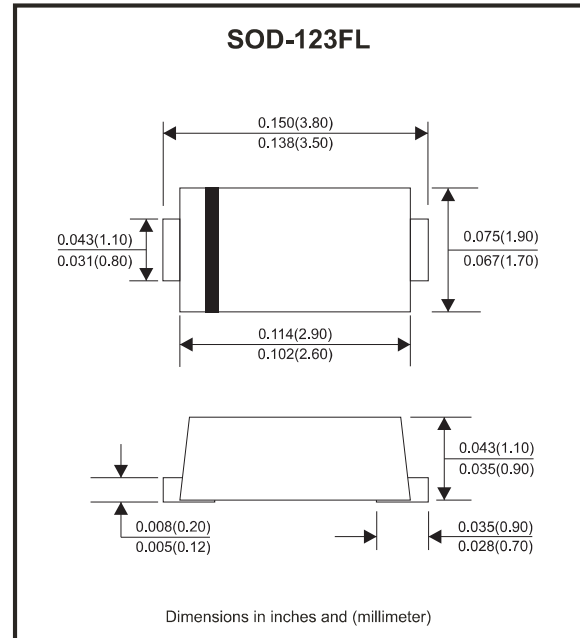
Features

- Metal silicon junction, majority carrier conduction.
- For surface mounted applications.
- Low power loss, high efficiency.
- High forward surge current capability.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.

Mechanical data

- Case: SOD-123FL.
- Terminals: Solderable per MIL-STD-750, method 2026.

Circuit Diagram



Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	DSK14	DSK16	DSK110	DSK150	DSK120	Units
Maximum repetitive peak reverse voltage	V_{RRM}	40	60	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	42	70	105	140	V
Maximum DC blocking voltage	V_{DC}	40	60	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0					A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25					A
Max instantaneous forward voltage at 1 A	V_F	0.55	0.70	0.85	0.90		V
Maximum DC reverse current at rated DC reverse voltage	I_R	$T_J = 25^\circ C$ 10	$T_J = 100^\circ C$ 5	0.2 5	0.1 2		mA
Typical junction capacitance (Note 1)	C_j	110	80				pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	90					°C/W
Operating junction temperature range	T_J	-55 ~ +125					°C
Storage temperature range	T_{stg}	-55 ~ +150					°C

Notes: 1. Measured at 1 MHz and applied reverse voltage of 4 V D.C

2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Company reserves the right to improve product design , functions and reliability without notice.

Rev:1.0

Rating and Characteristic Curves

Fig.1 - Forward Current Derating Curve

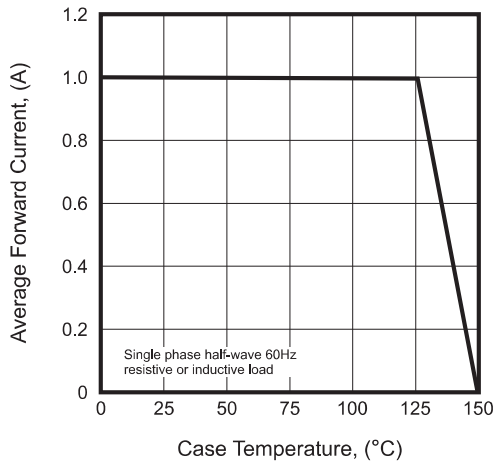


Fig.2 - Typical Reverse Characteristics

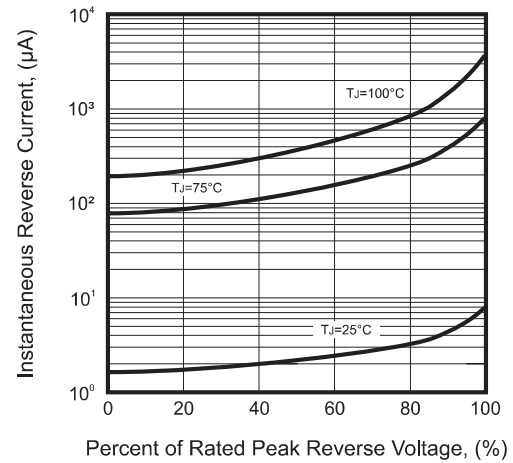


Fig.3 - Typical Forward Characteristic

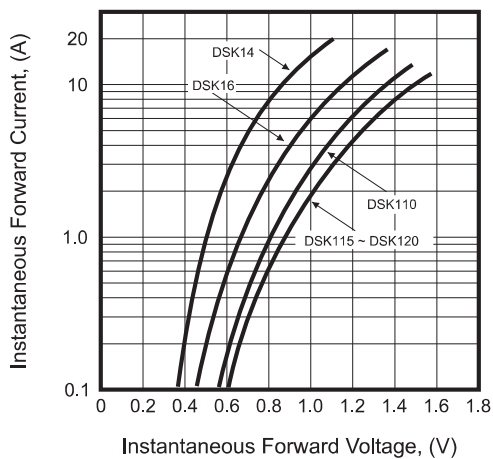


Fig.4 - Typical Junction Capacitance

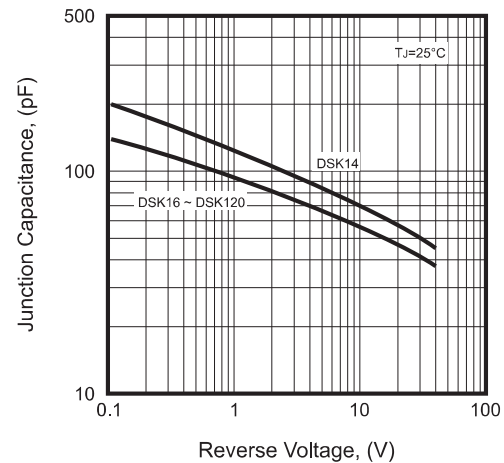


Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current

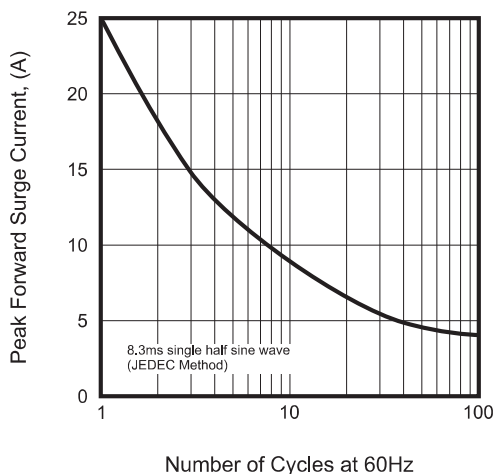
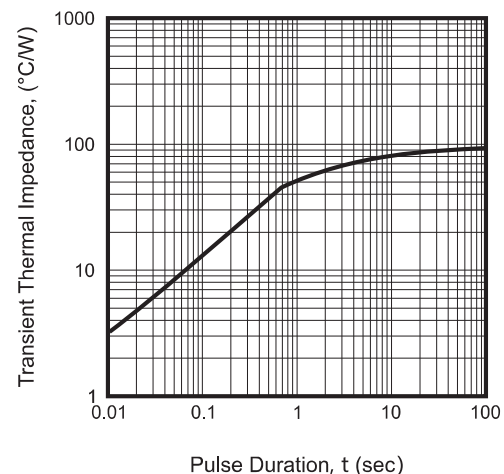
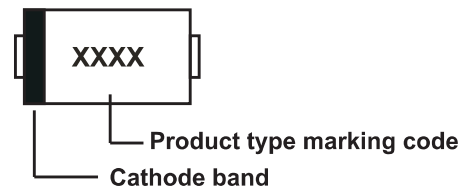


Fig.6 - Typical Transient Thermal Impedance



Marking Code

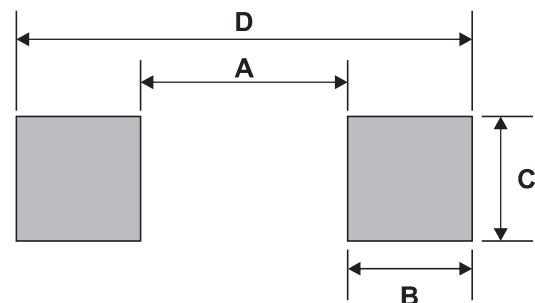
Part Number	Marking Code
DSK14	K14
DSK16	K16
DSK110	K110
DSK150	K115
DSK120	K120



xxx/xxxx = Product type marking code

Suggested P.C.B. PAD Layout

SIZE	SOD-123FL	
	(mm)	(inch)
A	2.00	0.079
B	1.20	0.047
C	1.20	0.047
D	4.40	0.173

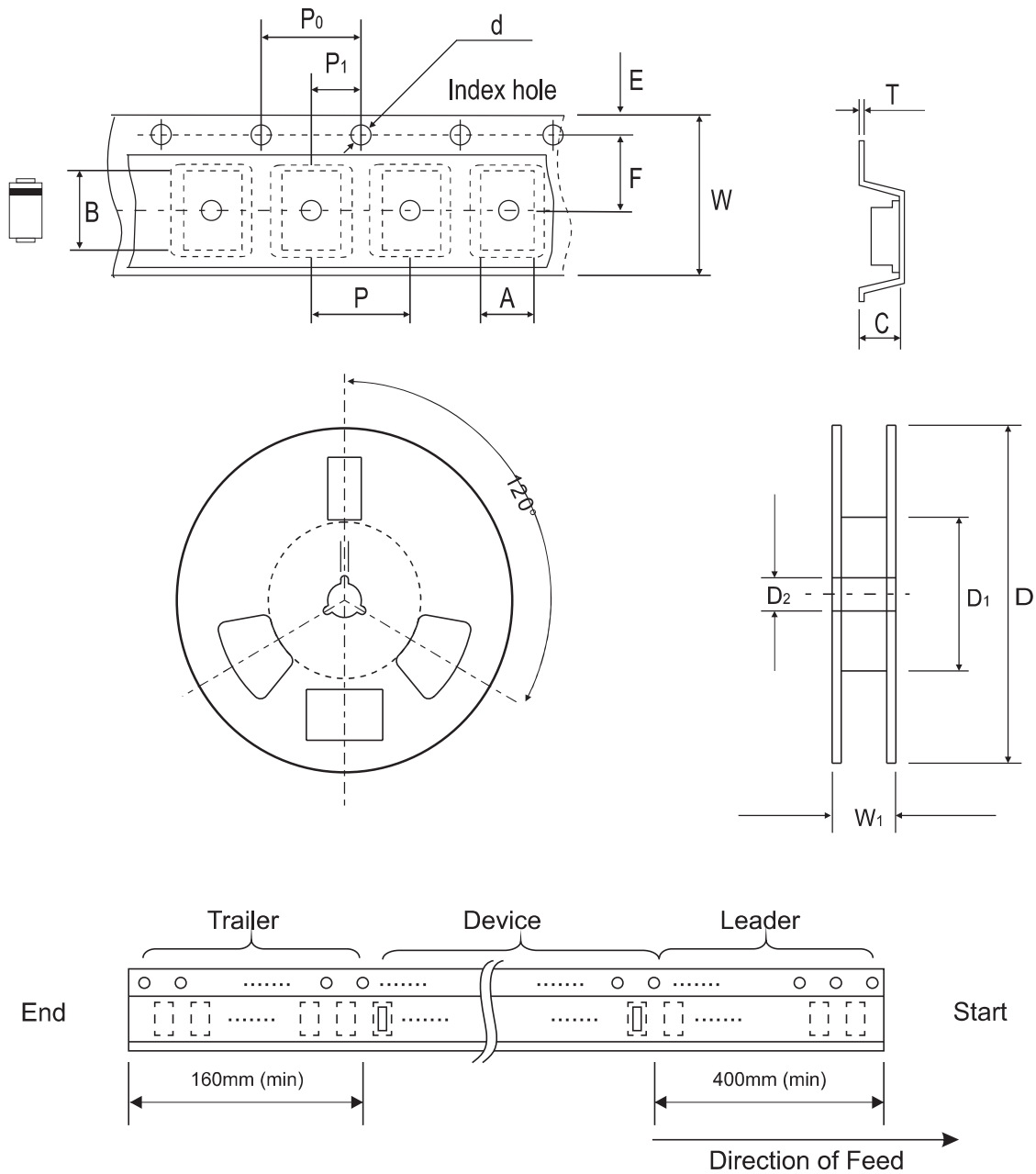


Note: 1. The pad layout is for reference purpose only.

Standard Packaging

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

Reel Taping Specification



SOD-123FL	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.95 ± 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)	0.077 ± 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

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

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