

**ERS0520LP**

Excellent Schottky Barrier Rectifiers

**SOD-123F**

Primary Characteristics

I_F	0.5	A
V_{RRM}	20	V
I_{FSM}	30	A
V_F	0.385	V
$T_J \text{ max}$	125	°C

Features

- High Current Capability
- For Surface Mount Application
- Low Forward Voltage

Mechanical Data

- Case : SOD-123F
- Case Material : Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals : Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity : Cathode Band
- External Lead-Free Finish
- Weight : 0.015 grams (approximate)

Ordering Information

Part No.	Remark	Package	Packing
ERS0520LP	RoHS Compliant	SOD-123F	3000 / Tape & Reel
ERS0520LP-H	Halogen Free		
ERS0520LP-Q	AEC-Q101 qualified		

Maximum Ratings (TA=25°C unless otherwise noted)

PARAMETER	Symbol	ERS0520LP	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	V
Maximum RMS Voltage	V_{RMS}	14	V
Maximum DC Blocking Voltage	V_{DC}	20	V
Maximum Average Forward Rectified Current	I_F	0.5	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	30	A
Maximum Instantaneous Forward Voltage IF=0.5A @ 25°C	V_F	0.385	V
Maximum DC Reverse Current @ TA=25°C	I_R	250	uA
Typical Junction Capacitance (NOTE1)	C_J	195	pF
Typical Thermal Resistance	$R_{\theta JC}$	70	°C/W
Operating Temperature Range	T_J	-55 ~ 125	°C
Storage Temperature Range	T_{STG}	-55 ~ 125	°C

NOTES :

1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC



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Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

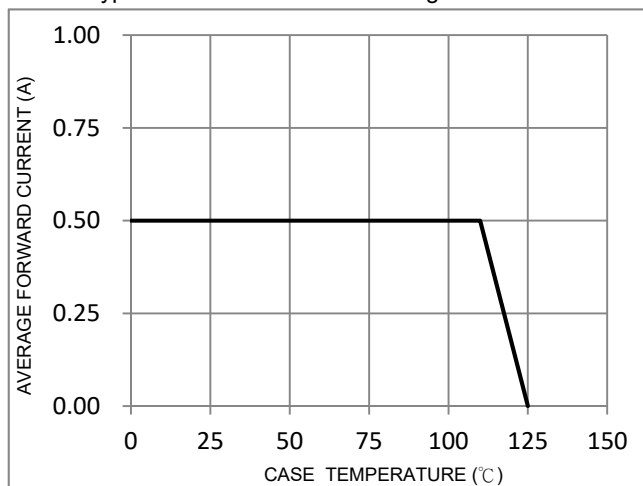


FIG. 2-Typical Forward Characteristics

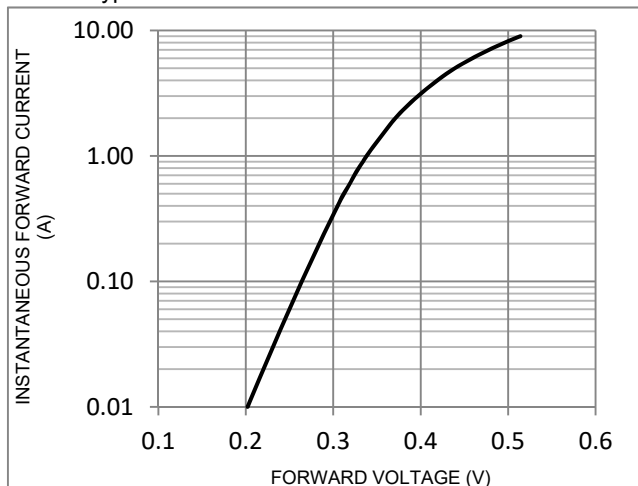


FIG. 3-Maximum Non-Repetitive Forward Surge Current

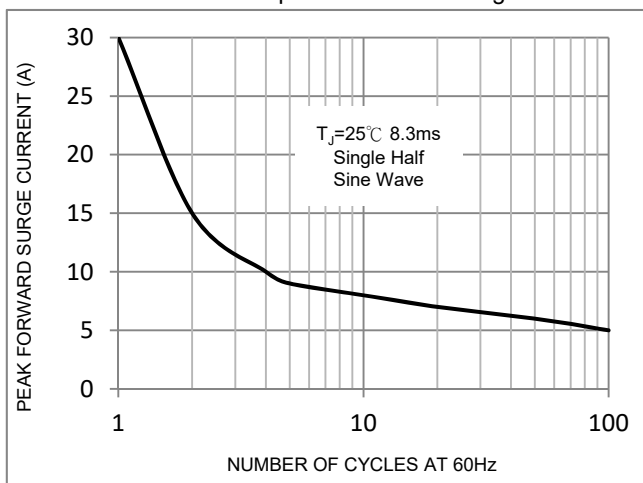


FIG. 4-Typical Reverse Characteristics

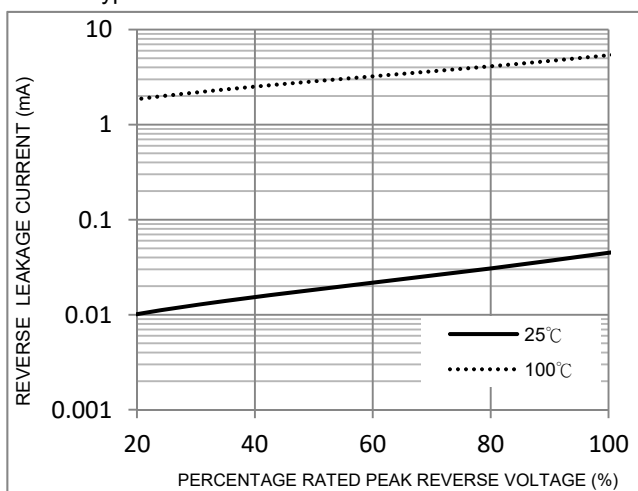
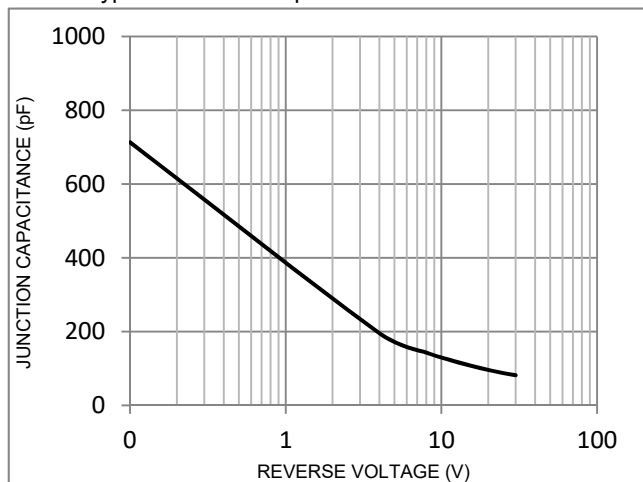


FIG. 5-Typical Junction Capacitance



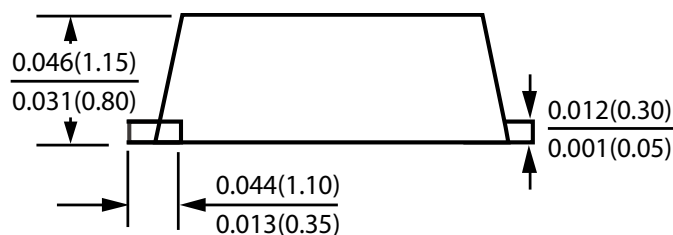
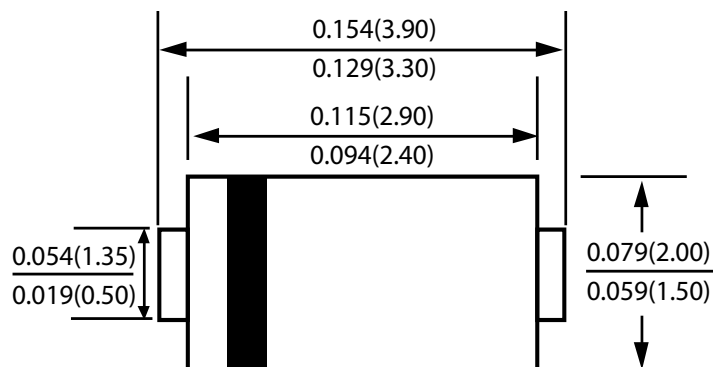


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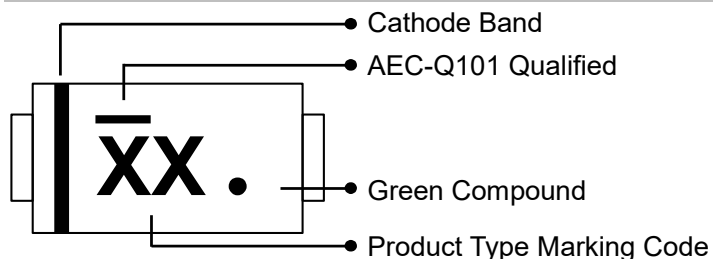
Package Outline Dimensions



SOD-123F

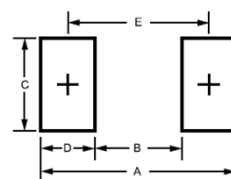
Dimensions in inches and (millimeters)

Marking Information



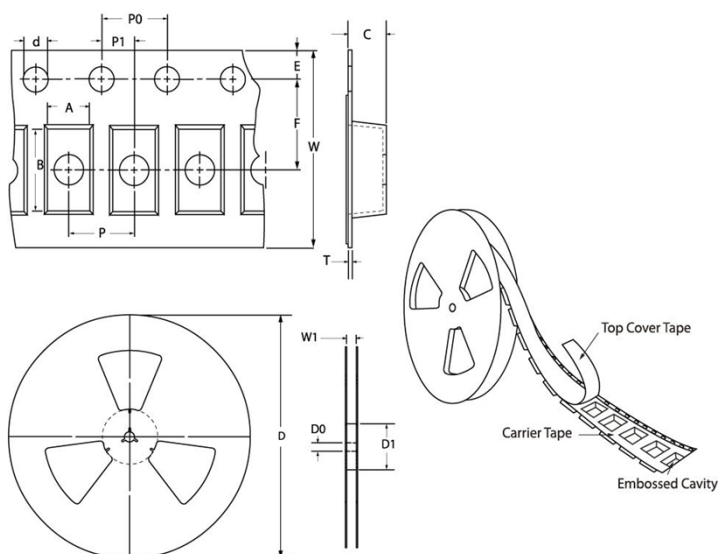
Suggested Pad Layout

Dimension	Outline	SOD-123F (mm)
A		4.20
B		1.52
C		1.80
D		1.34
E		2.86



Tape & Reel Specification

Item	Symbol	SOD-123F (mm)
Carrier width	A	2.00 ± 0.15
Carrier length	B	3.98 ± 0.13
Carrier depth	C	1.38 ± 0.17
Sprocket hole	d	1.75 ± 0.35
Reel outside diameter	D	180 (max)
Reel inner diameter	D1	50 (min)
Feed Hole diameter	D0	13.1 ± 0.6
Sprocket hole position	E	1.75 ± 0.1
Punch hole position	F	3.5 ± 0.1
Punch hole pitch	P	4.0 ± 0.1
Sprocket hole pitch	P0	4.0 ± 0.1
Embossment center	P1	2.0 ± 0.1
Overall tape thickness	T	0.28 (max)
Tape width	W	8.0 ± 0.3
Reel width	W1	10 ± 2





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