

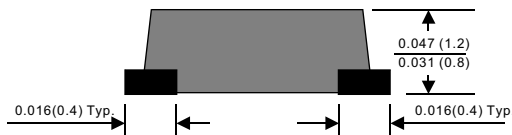
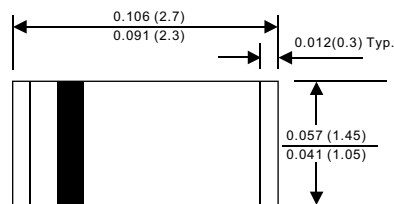
FM120-N THRU FM1100-N

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CHIP SCHOTTKY BARRIER RECTIFIER

1.0A Surface Mount Schottky Barrier Rectifiers - 20V-100V

SOD-323



FEATURES

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Very tiny plastic SMD package.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

MECHANICAL DATA

- Epoxy : UL94-V0 rated flame retardant
- Case : Moulded plastic, SOD-323
- Terminals : Plated terminals, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.008 gram

MAXIMUM RATING (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

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PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_o			1.0	A
Forward surge current	8.3ms single halfsine-wave superimposed on rate load (JEDEC method)	I_{FSM}			30	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^{\circ}\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM}$ $T_A = 125^{\circ}\text{C}$				10	
Thermal resistance	Junction to ambient	$R_{\theta JA}$		90		$^{\circ}\text{C}/\text{W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_j		120		pF
Storage temperature		T_{STG}	-65		+175	$^{\circ}\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature T_J ($^{\circ}\text{C}$)
FM120-N	20	14	20	0.55	-55 to +125
FM130-N	30	21	30		
FM140-N	40	28	40		
FM150-N	50	35	50	0.70	-55 to +150
FM160-N	60	42	60		
FM180-N	80	56	80	0.85	
FM1100-N	100	70	100		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage

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Rating and characteristic curves (FM120-N THRU FM1100-N)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

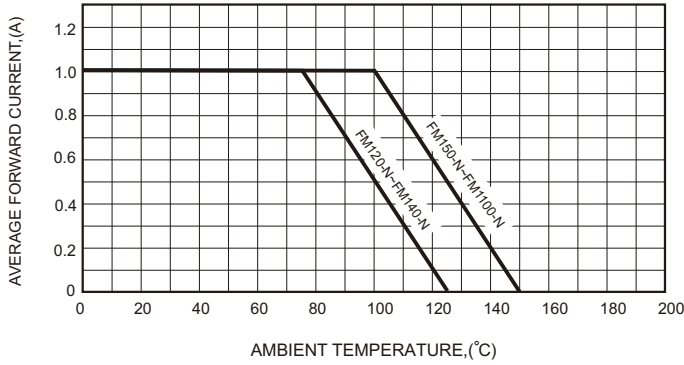


FIG.2-TYPICAL FORWARD CHARACTERISTICS

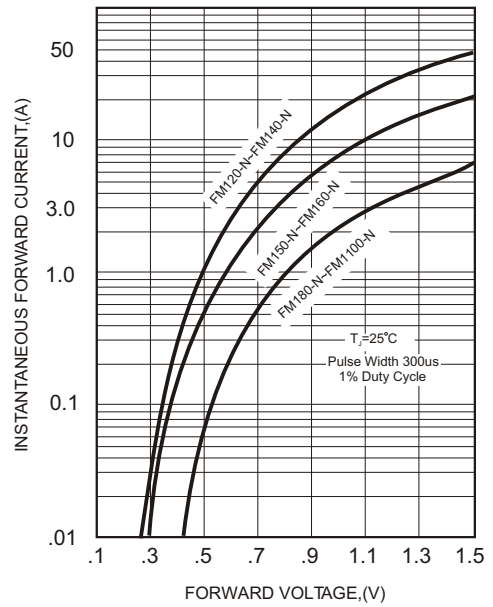


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

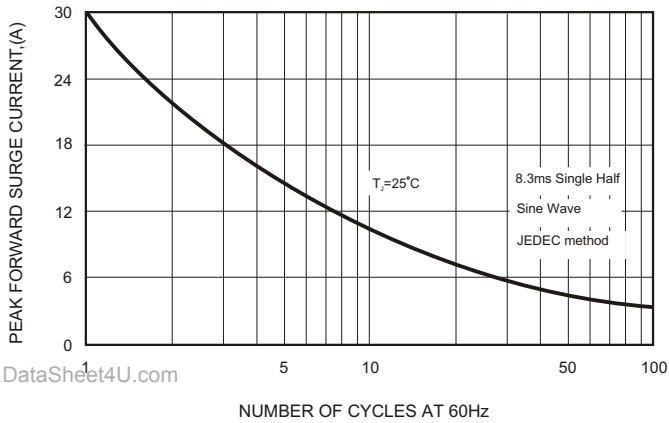


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

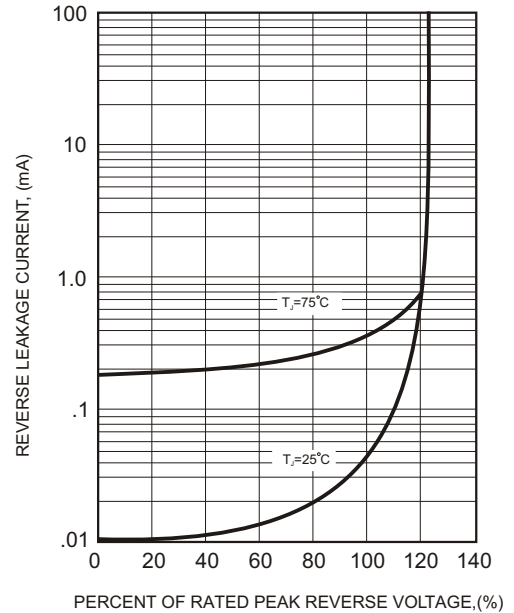
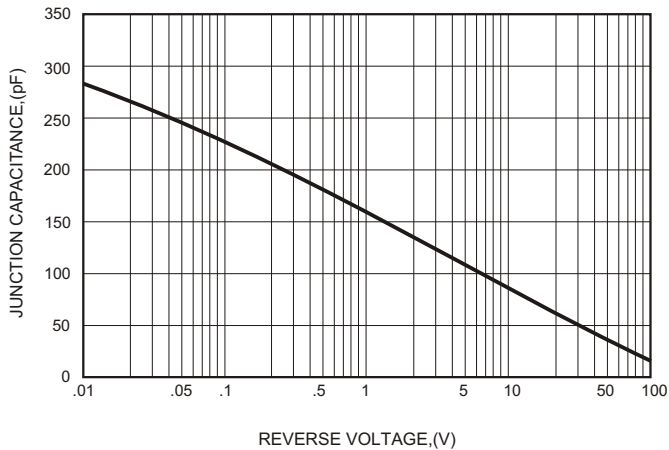




FIG.4-TYPICAL JUNCTION CAPACITANCE



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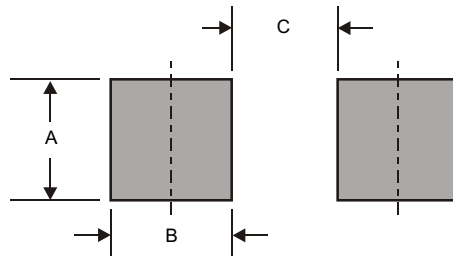
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
FM120-N	12
FM130-N	13
FM140-N	14
FM150-N	15
FM160-N	16
FM180-N	18
FM1100-N	10

Suggested solder pad layout



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Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323	0.059 (1.50)	0.039 (1.00)	0.051 (1.30)