

## II. Schottky Rectifier

### 1.0A Surface Mount Schottky Rectifier FM102~FM110

(Package: SOD-123)

<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Silicon epitaxial planar chip, metal-silicon junction</li> <li>• Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance</li> <li>• Ultra high speed switching</li> <li>• Low power loss, high efficiency</li> <li>• Low forward voltage drop, high current capability</li> <li>• Guardring for overvoltage protection</li> <li>• The plastic material carries UL recognition 94V-0</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• Case : Molded plastic, SOD-123 / Mini SMA</li> <li>• Terminals : Plated terminals, solderable per MIL-STD-750, Method 2026</li> <li>• Mounting position : Any</li> <li>• Polarity : Color band denotes cathode</li> <li>• Weight : approx. 0.027 grams</li> </ul>	<p>Case: SOD-123 Dimensions in inches and (millimeters)</p>
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### Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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

Characteristics	Symbol	FM102	FM103	FM104	FM105	FM106	FM108	FM110	Units
Component Marking		12	13	14	15	16	18	110	
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current See Fig.1	$I_o$	1.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load. (JEDEC Method)	$I_{FSM}$	30							Amps
Maximum forward voltage at 1.0 A DC	$V_F$	0.50		0.70		0.85		Volts	
Maximum DC reverse current at rated DC blocking voltage	$I_R$	0.5 10							mA
Typical junction capacitance (Note 1)	$C_j$	120							PF
Typical thermal resistance (Note 2)	$R_{th-JA}$	98							/W
Operating temperature range	$T_j$	-55 to +125			-55 to +150				
Storage temperature range	$T_{stg}$	-65 to +175							

Notes:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
2. Thermal resistance junction to ambient.

# Ratings and Characteristic Curves of FM102~FM110

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

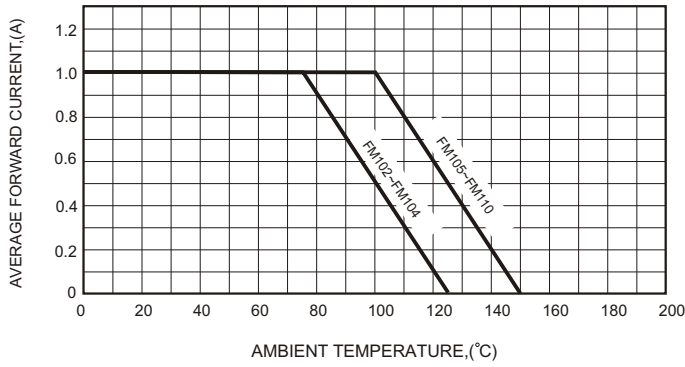


FIG.2-TYPICAL FORWARD CHARACTERISTICS

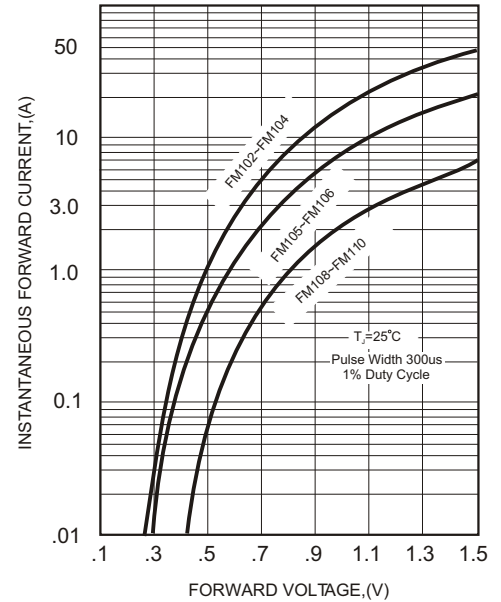


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

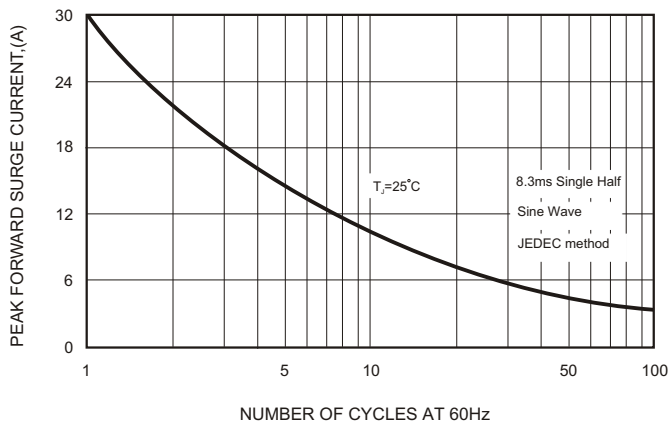


FIG.4-TYPICAL JUNCTION CAPACITANCE

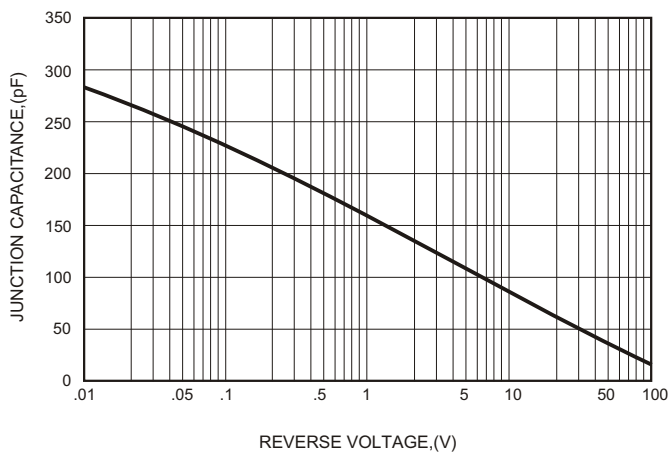


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

