

**FAST RECOVERY RECTIFIER**

**VOLTAGE RANGE 1600 Volts CURRENT 0.5 Ampere**

**FEATURES**

- \* Fast switching
- \* Glass passivated device
- \* Low forward voltage drop
- \* High surge capability
- \* High reliability
- \* Anti-ESD and Flat lead frame
- \* Halogen-free
- \* P/N suffix V means AEC-Q101 qualified, e.g:F16FV

**MECHANICAL DATA**

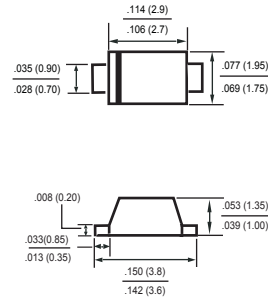
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Mounting position: Any

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Resistive or inductive load.



**SOD-123F**



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

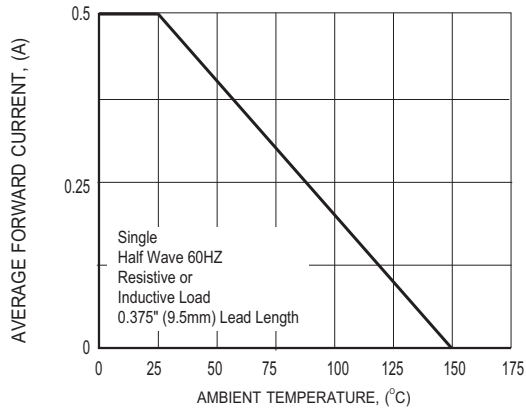
RATINGS	SYMBOL	F16F	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	1600	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	1120	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	1600	Volts
Maximum Average Forward Rectified Current @ TA=25 °C	I <sub>O</sub>	0.5	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	25	Amps
Typical Current Square Time	I <sup>2</sup> T	2.6	A <sup>2</sup> S
Operating Temperature Range	T <sub>J</sub>	-55 to + 150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to + 150	°C
Typical Junction Capacitance(Note 1)	C <sub>J</sub>	15	pF

**ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)**

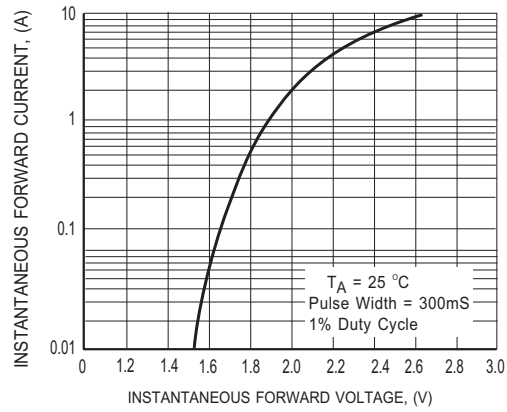
CHARACTERISTICS	SYMBOL	F16F	UNITS
Maximum Instantaneous Forward Voltage at 0.5A DC	V <sub>F</sub>	1.8	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@TA = 25°C	5.0	uAmps
	@TA = 150 °C	1.0	mAmps
Maximum Reverse Recovery Time (Note 4)	T <sub>rr</sub>	300	nS

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4 Volts.  
 2. "ROHS compliant".  
 3. Thermal Resistance: Mounted on PCB.  
 4. Reverse Recovery Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = -1.0A, I<sub>RR</sub> = -0.25A

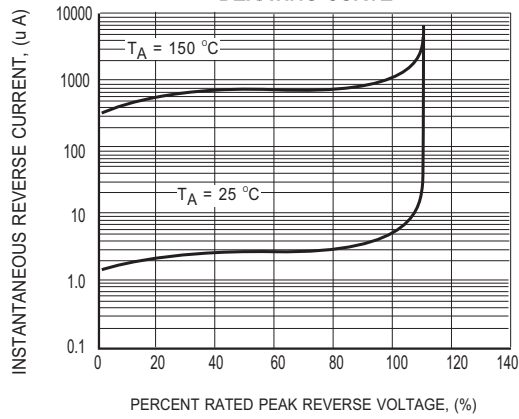
## RATING AND CHARACTERISTICS CURVES (F16F)



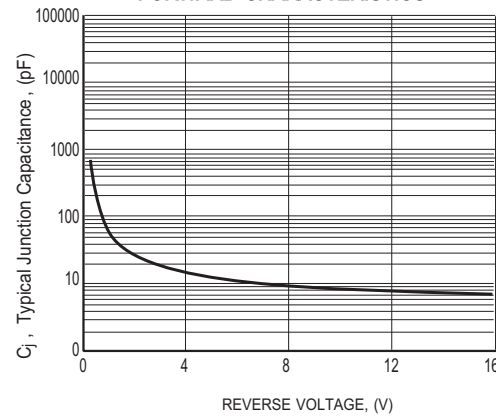
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



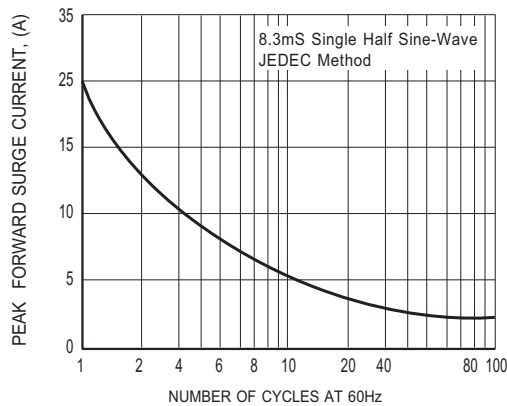
**FIG.2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.3 MAXIMUM REVERSE CHARACTERISTICS**

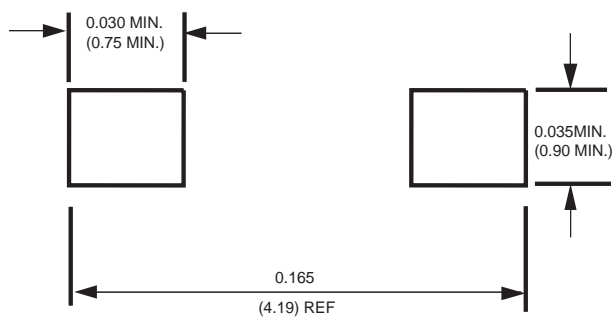


**FIG.4 TYPICAL TOTAL CAPACITANCE**



**FIG.5 TYPICAL REVERSE CHARACTERISTICS**

## Mounting Pad Layout

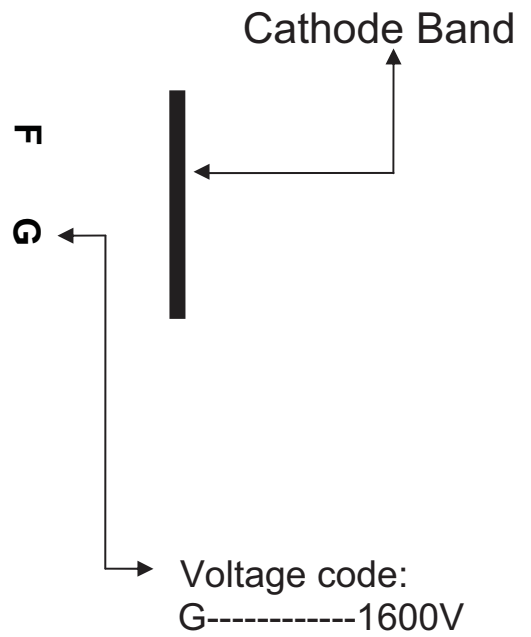


Dimensions in inches and (millimeters)

# Marking Description

Year- code: ← ←  
( Last digit of year &  
A:2010,B:2011...)

Week code: ← ←  
A: week 01~02  
B: week 03~04  
C: week 05~06  
.....  
Z: week 51~52



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOD-123F/ SOD-123FL	-W	3,000	15,000	---	---	178	390*205*31	120,000	6.964

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