

# FK1K

## SURFACE MOUNT FAST RECOVERY RECTIFIER

VOLTAGE: 700V

CURRENT: 1.0A



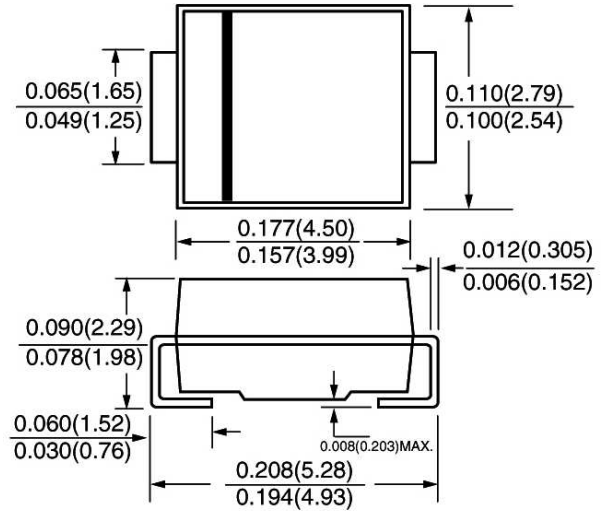
### FEATURE

Ideal for surface mount pick and place applications  
Low profile package  
Built-in strain relief  
High surge capability  
Glass passivated chip  
Fast recovery time for high efficiency

### MECHANICAL DATA

Terminal: Solder plated, solderable per MIL-STD750,  
Method 2026  
High temperature soldering guaranteed:  
250°C/10 seconds at terminals  
Case: JEDEC DO-214AC(SMA) molded plastic body  
Polarity: color band denotes cathode

### SMA / DO-214AC



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated,  
for capacitive load, derate current by 20%)

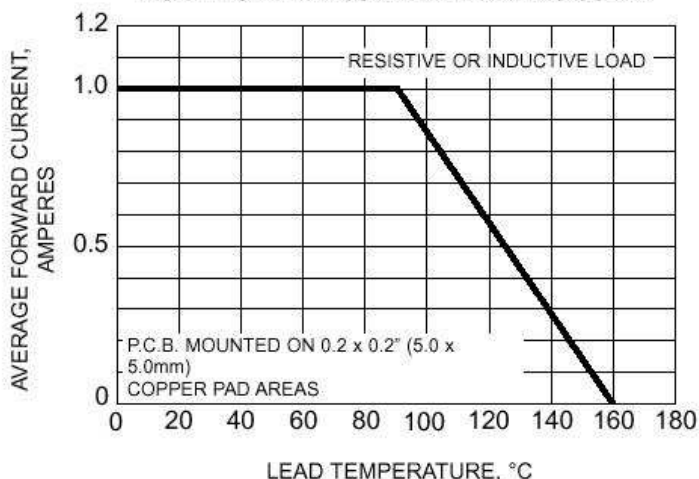
	SYMBOL	FK1K	units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	700	V
Maximum RMS Voltage	V <sub>rms</sub>	490	V
Maximum DC blocking Voltage	V <sub>dc</sub>	700	V
Maximum Average Forward Rectified Current 3/8" lead length at Ta=90°C	I <sub>f(av)</sub>	1.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>fsm</sub>	30.0	A
Maximum Forward Voltage at rated forward current	V <sub>f</sub>	1.3	V
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =125°C	I <sub>r</sub>	5.0 300.0	μA μA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	400	nS
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	10.0	pF
Typical Thermal Resistance (Note 3)	R(ja)	32.0	°C /W
Storage and Operating Junction Temperature	T <sub>stg</sub> , T <sub>j</sub>	-50 to +150	°C

#### Note:

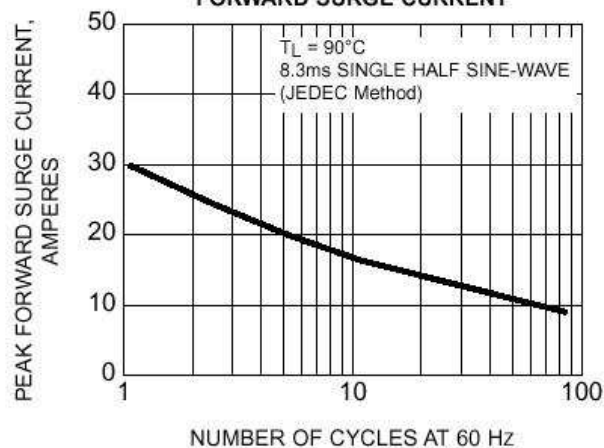
1. Reverse Recovery Condition I<sub>f</sub> =0.5A, I<sub>r</sub> =1.0A, I<sub>rr</sub> =0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to terminal mounted on 5×5mm copper pad area

## RATINGS AND CHARACTERISTIC CURVES FK1K

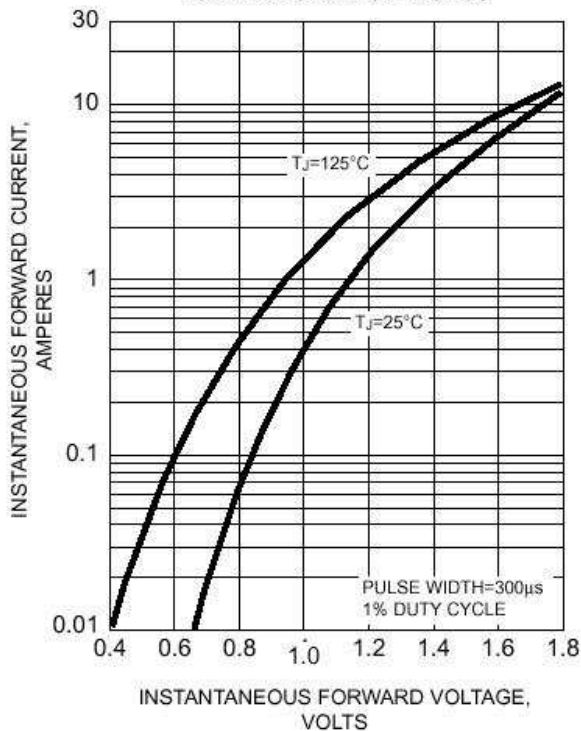
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



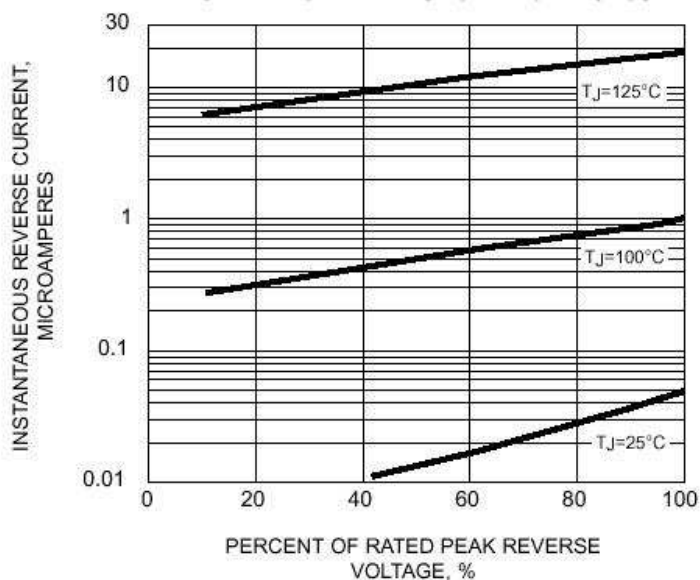
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



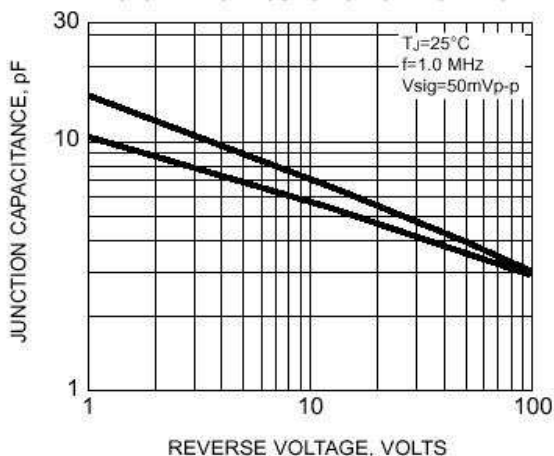
**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**



**FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE**

