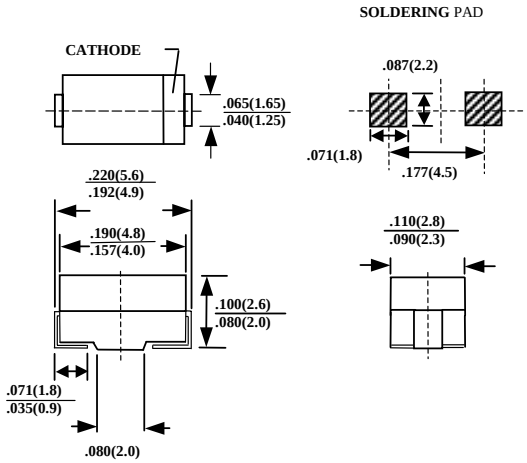
FRONTIER
ELECTRONICS CO., LTD.

# FFM05-10 THRU FFM05-20

## SURFACE MOUNT FAST RECOVERY PHOTO FLASH RECTIFIER

**FEATURES**
- FOR SURFACE MOUNTED APPLICATIONS
- LOW PROFILE PACKAGE
- BUILT-IN STRAIN RELIEF
- EASY PICK AND PLACE
- PLASTIC MATERIAL USED CARRIES UNDERWRITERS LABORATORY CLASSIFICATION 94 V-0
- FAST SWITCHING
- HIGH TEMPERATURE SOLDERING：250℃/10 SECONDS AT TERMINALS

**MECHANICAL DATA**
- CASE：MOLDED PLASTIC
- TERMINALS：SOLDER PLATED
- POLARITY：INDICATED BY CATHODE BAND
- WEIGHT：0.064 GRAMS




CASE：DO-214AC (SMA)
DIMENSIONS IN INCHES AND (MILLIMETERS)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED
SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD.
FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%

| RATINGS | SYMBOL | FFM05-10 | FFM05-15 | FFM05-16 | FFM05-18 | FFM05-20 | UNITS |
|---|---|---|---|---|---|---|---|
| MAXIMUM RECURRENT PEAK REVERSE VOLTAGE | $V_{RRM}$ | 1000 | 1500 | 1600 | 1800 | 2000 | V |
| MAXIMUM RMS VOLTAGE | $V_{RMS}$ | 700 | 1050 | 1120 | 1260 | 1400 | V |
| MAXIMUM DC BLOCKING VOLTAGE | $V_{DC}$ | 1000 | 1500 | 1600 | 1800 | 2000 | V |
| MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT AT TL=90°C | $I_O$ | 0.5 | | | | | A |
| MAXIMUM OVERLOAD SURGE,8.3ms SINGLE HALF SINE-WAVE | $I_{FSM}$ | 30 | | | | | A |
| TYPICAL THERMAL RESISTANCE (NOTE 2) | $R_{\theta jL}$ | 20 | | | | | ℃/W |
| TYPICAL JUNCTION CAPACITANCE (NOTE 1) | $C_J$ | 15 | | | | | PF |
| STORAGE TEMPERATURE RANGE | $T_{STG}$ | -55 TO + 150 | | | | | ℃ |
| OPERATING TEMPERATURE RANGE | $T_{OP}$ | -55 TO + 125 | | | | | ℃ |

**ELECTRICAL CHARACTERISTICS ($A_T$ $T_A$ =25°C UNLESS OTHERWISE NOTED)**

| CHARACTERISTICS | SYMBOL | FFM05-10 | FFM05-15 | FFM05-16 | FFM05-18 | FFM05-20 | UNITS |
|---|---|---|---|---|---|---|---|
| MAXIMUM FORWARD VOLTAGE AT $I_O$ DC | $V_F$ | 2.0 | | | | | V |
| MAXIMUM REVERSE CURRENT AT 25℃ | $I_R$ | 5 | | | | | μA |
| MAXIMUM REVERSE RECOVERY TIME (NOTE 3) | $T_{RR}$ | 500 | | | | | nS |

NOTE： 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE 0F 4.0 VOLTS
2. THERMAL RESISTANCE FROM JUNCTION TO AMBIENT AND JUNCTION TO LEAD P.C.B. MOUNTED ON 0.3×0.3”(8.0×8.0mm) COPPER PAD AREAS
3. REVERSE RECOVERY TEST CONDITIONS: $I_F$=0.5A, $I_R$=1.0A, $I_{RR}$=0.25A

# RATINGS AND CHARACTERISTICS CURVES FFM05-10 THRU FFM05-20

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

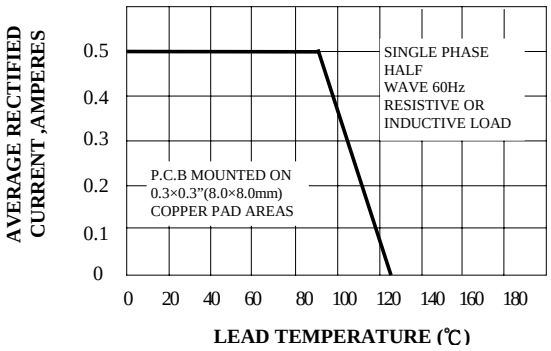



**FIG. 2-MAXIMUM FORWARD SURGE VS NUMBER OF CYCLES**

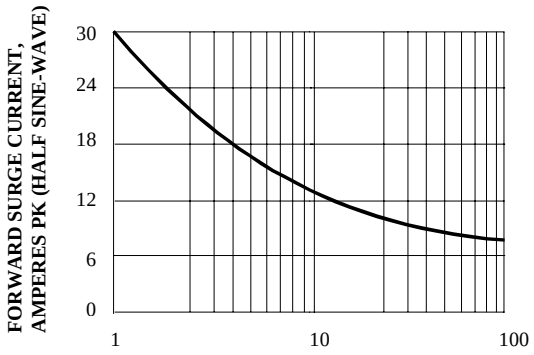



**FIG. 3-TYPICAL REVERSE CHARCTERISTICS AT $T_J$=25℃**

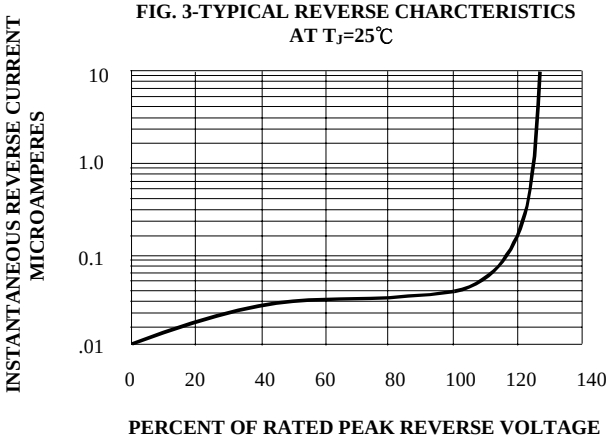



**FIG. 4-TYPICAL JUNCTION CAPACITANCE**

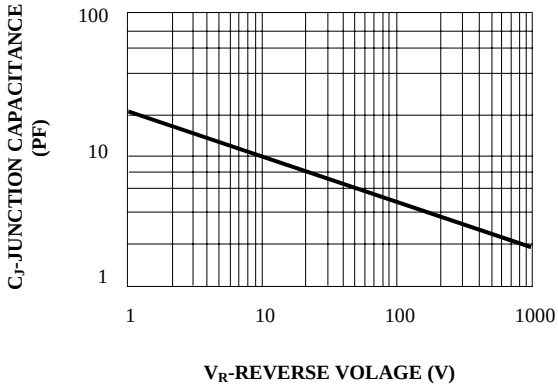



**FIG. 5 TYPICAL FORWARD CHARACTERISTICS**