



## PRIMARY CHARACTERISTICS

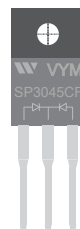
|             |                         |
|-------------|-------------------------|
| $V_{RRM}$   | 45V,60V,100V,150V,200V  |
| $I_F$       | 30A                     |
| $V_F$       | 0.60V,0.75V,0.85V,0.92V |
| $T_{J,Max}$ | 125°C,150°C             |

## FEATURES

- Guard Ring for over voltage Protection
- High forward surge capability
- High frequency operation
- Component in accordance to RoHS 2002/95/EC
- Moisture Sensitivity Level 1

## ITO-220 PACKAGE

Body Marking :  
Please see specifications  
Ex : SP3045CF



V:Product Lines  
Y:1-digit BC year code, 4-2014,5-2015...etc  
M:Month, EX : 1-1,2-2,---10-O,11-N,12-D

## MECHANICAL DATA

- Case : Molded plastic, ITO-220
- Polarity : Shown above
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Epoxy : UL94-V0 rated flame retardant

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

| PARAMETER                                                                             | SYMBOL           | SP3045CF     | SP3060CF     | SP30100CF    | SP30150CF    | SP30200CF | UNIT |
|---------------------------------------------------------------------------------------|------------------|--------------|--------------|--------------|--------------|-----------|------|
| Marking Code                                                                          |                  | SP3045CF     | SP3060CF     | SP30100CF    | SP30150CF    | SP30200CF |      |
| Maximum repetitive peak reverse voltage                                               | V <sub>RRM</sub> | 45           | 60           | 100          | 150          | 200       | V    |
| Maximum RMS voltage                                                                   | V <sub>RMS</sub> | 36           | 42           | 70           | 105          | 140       | V    |
| Maximum DC blocking voltage                                                           | V <sub>DC</sub>  | 45           | 60           | 100          | 150          | 200       | V    |
| Maximum average forward rectified current<br>(Total)<br>(Per Leg)                     | I <sub>F</sub>   | 30<br>15     |              |              |              |           | A    |
| Peak forward surge current, 8.3ms single half<br>sine-wave superimposed on rated load | I <sub>FSM</sub> | 200.0        |              |              |              |           | A    |
| Maximum Instantaneous IF=15A @ 25°C<br>Forward Voltage IF=15A @100°C                  | V <sub>F</sub>   | 0.60<br>0.55 | 0.75<br>0.65 | 0.85<br>0.75 | 0.92<br>0.82 |           | V    |
| Maximum DC Reverse Current @ Tc=25°C<br>at Rated DC Blocking Voltage @ Tc=100°C       | I <sub>R</sub>   | 1<br>50      |              | 0.5<br>20    |              |           | mA   |
| Typical Junction Capacitance(NOTE1)                                                   | C <sub>j</sub>   | 800          | 600          | 450          | 350          |           | pF   |
| Typical Thermal Resistance                                                            | R <sub>θJC</sub> | 3            |              |              |              |           | °C/W |
| Operating Temperature Range                                                           | T <sub>J</sub>   | -55 to +125  |              |              | -55 to +150  |           | °C   |
| Storage Temperature Range                                                             | T <sub>STG</sub> | -55 to +150  |              |              |              |           | °C   |

NOTES:1.Measured at 1.0MHZ and applied reverse voltage of 4.0V DC



FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

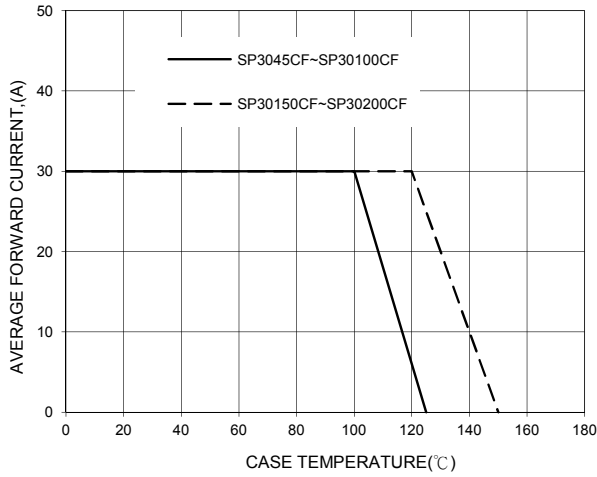


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

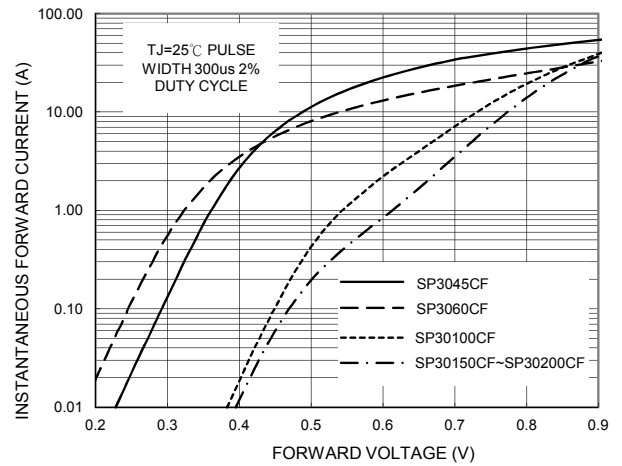


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

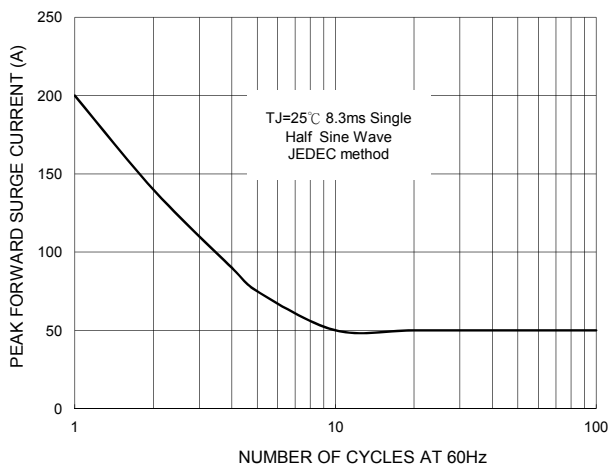


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

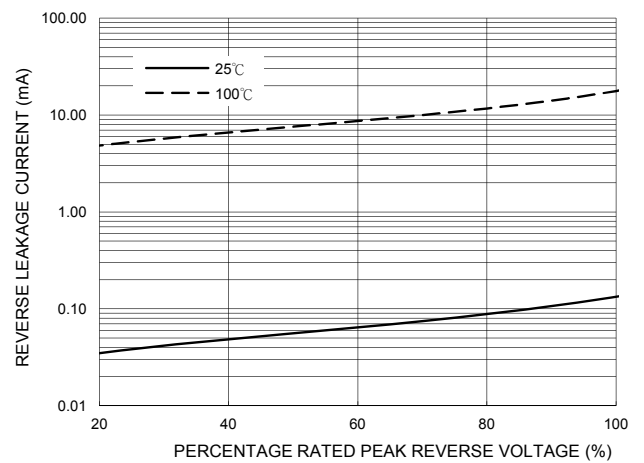
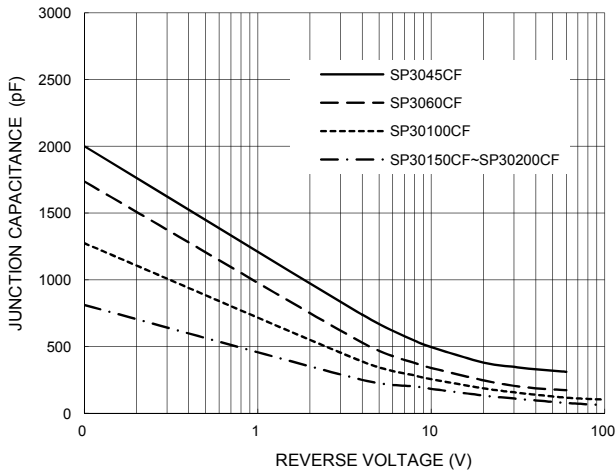
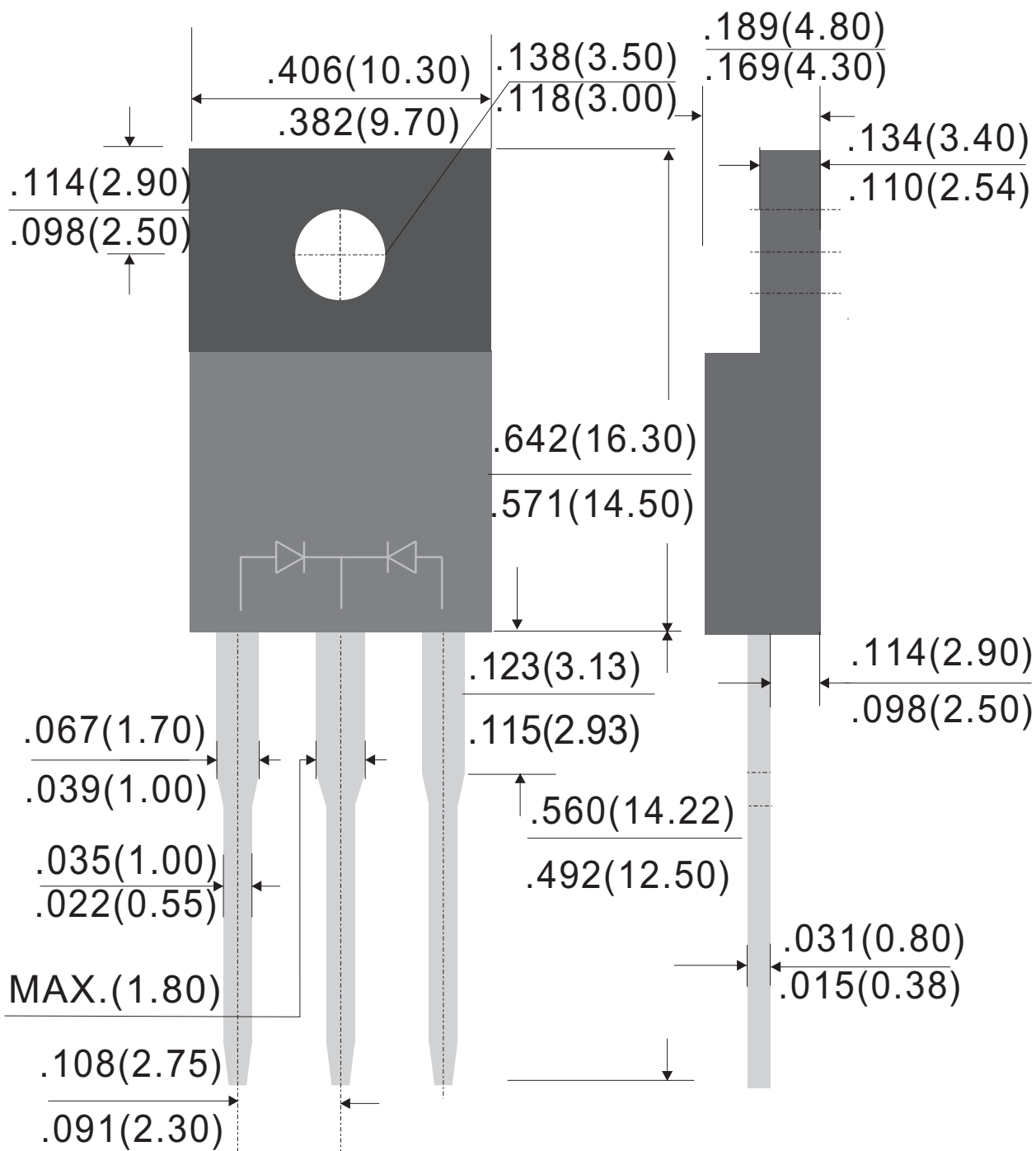


FIG. 5-TYPICAL JUNCTION CAPACITANCE



# Outline Drawing

## ITO-220



Dimensions in inches and (millimeters)

Rev.H

### Ordering Information:

| Device PN                                         | Packing                               |
|---------------------------------------------------|---------------------------------------|
| Part Number - <sup>(1)</sup> G <sup>(2)</sup> -WS | Tube Packing: 50pcs/Tube; 2000pcs/Box |

**Note:** 1. Packing code: Empty is Tube Packing

2. RoHS product for packing code suffix "G", Halogen free product for packing code suffix "H".

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