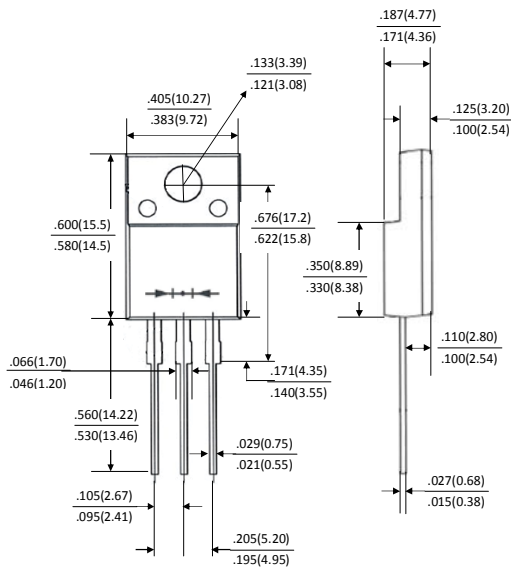




# SP3020C thru SP30200C



## Schottky Barrier Rectifiers



### ITO-220AB

Dimensions in inches and (millimeters)

Ordering Information	
Part Number	Remark
SP30xxC	General
SP30xxC-H	Halogen Free
SP30xxC-Q	Automotive

PRIMARY CHARACTERISTICS	
$I_F$	30A
$V_{RRM}$	20~200V
$I_{FSM}$	200A
$V_F$	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
- AEC-Q101 qualified

### Mechanical Data

- Case: ITO-220AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over copper Leadframe. Solderable per MIL-STD-202
- Weight: 1.689 grams (approximate)

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

PARAMETER	SYMBOL	SP30 20C	SP30 40C	SP30 45C	SP30 50C	SP30 60C	SP30 80C	SP30 100C	SP30 150C	SP30 200C	UNIT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	40	45	50	60	80	100	150	200	V	
Maximum RMS voltage	$V_{RMS}$	14	28	31.5	35	42	56	70	105	140	V	
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	V	
Maximum average forward rectified current (Total) (Per Leg)	$I_F$	30 15									A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	200.0									A	
Maximum Instantaneous $I_F=15A @ 25^\circ C$ Forward Voltage $I_F=15A @ 100^\circ C$	$V_F$	0.60 0.55		0.75 0.65		0.85 0.75		0.92 0.82		V		
Maximum DC Reverse Current @ $T_c=25^\circ C$ at Rated DC Blocking Voltage @ $T_c=100^\circ C$	$I_R$	1 50					0.5 20				mA	
Typical Junction Capacitance(NOTE1)	$C_j$	800			600		450		350		pF	
Typical Thermal Resistance	$R_{\theta JC}$	3									°C/W	
Operating Temperature Range	$T_J$	-55 to +125						-55 to +150				°C
Storage Temperature Range	$T_{STG}$	-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

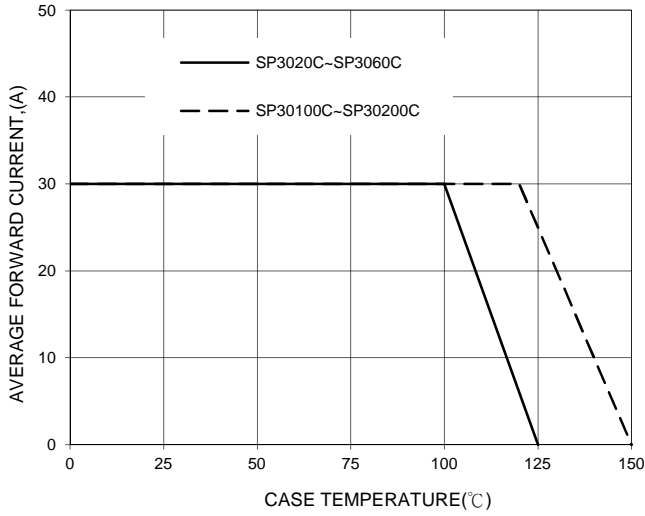


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

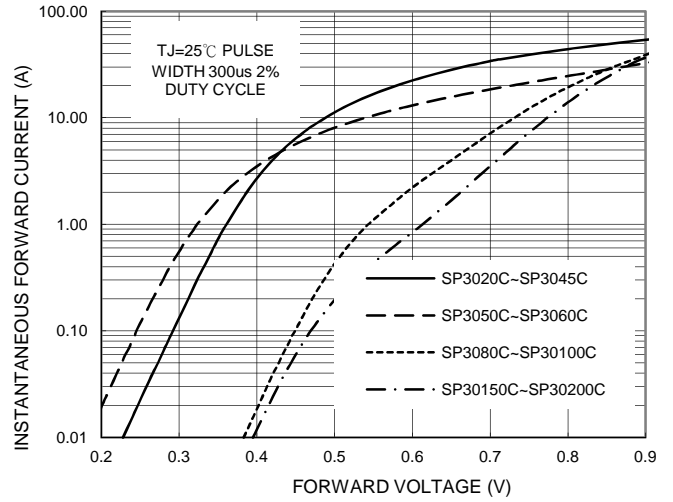


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

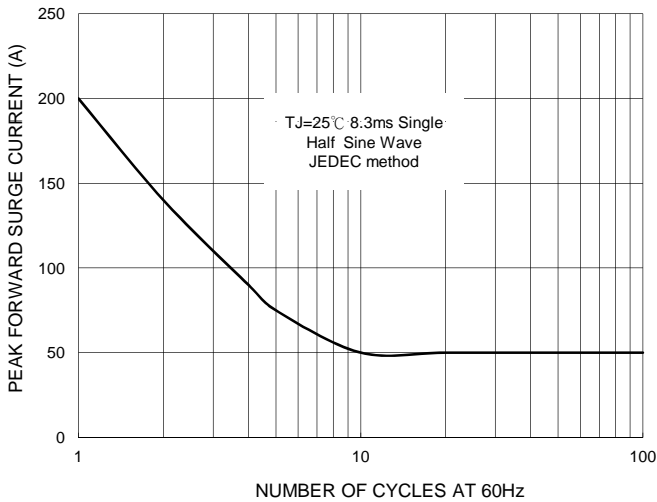


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

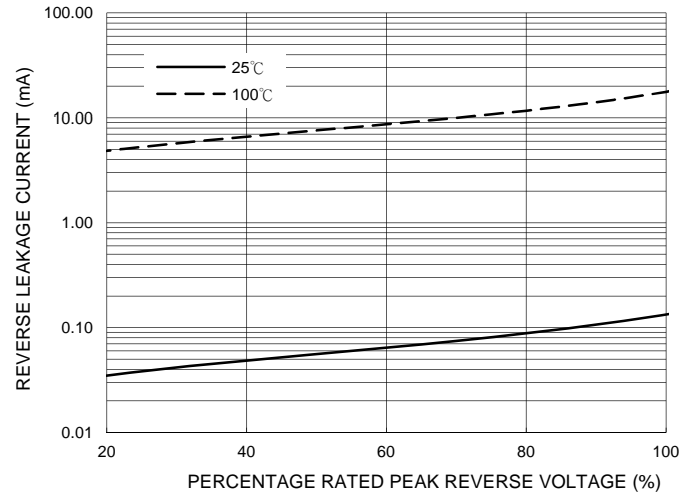


FIG. 5-TYPICAL JUNCTION CAPACITANCE

