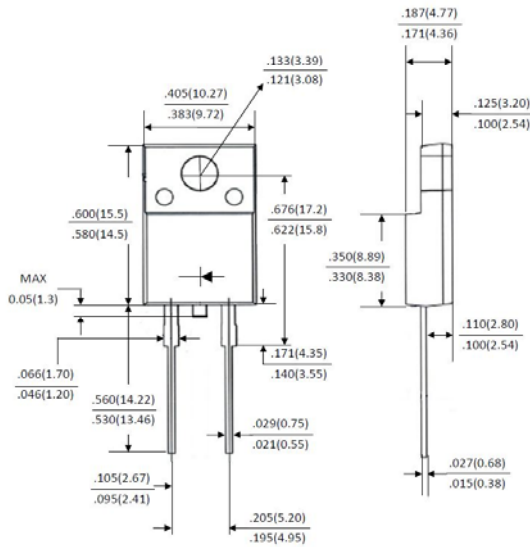




# SP520S thru SP5200S



## Schottky Barrier Rectifiers



### ITO-220AC

Dimensions in inches and (millimeters)

Ordering Information	
Part Number	Remark
SP5xxS	General
SP5xxS-H	Halogen Free
SP5xxS-Q	Automotive

PRIMARY CHARACTERISTICS	
$I_F$	5A
$V_{RRM}$	20~200V
$I_{FSM}$	100A
$V_F$	0.55V, 0.70V, 0.85V, 0.87V, 0.90V
$T_J$ max	125°C, 150°C

#### Features

- Guardring for overvoltage protection
- Very small conduction losses
- Low forward voltage drop
- Component in accordance to RoHS 2002/95/EC
- AEC-Q101 qualified

#### Mechanical Data

- Cases: ITO-220AC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish)  
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.64 grams (approximate)

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

PARAMETER	SYMBOL	SP5 20S	SP5 30S	SP5 40S	SP5 50S	SP5 60S	SP5 80S	SP5 100S	SP5 150S	SP5 200S	UNIT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	V	
Maximum RMS voltage	$V_{RMS}$	14	21	28	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	$I_F$	5.0									A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	100.0									A	
Maximum Instantaneous Forward Voltage $I_F=5A @ 25^\circ C$	$V_F$	0.55			0.70		0.85		0.87 0.90		V	
Maximum DC Reverse Current @ $T_c=25^\circ C$ at Rated DC Blocking Voltage @ $T_c=100^\circ C$	$I_R$	0.5 10					0.2 5.0					mA
Typical Junction Capacitance(NOTE1)	$C_j$	320			300		200		180 120		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

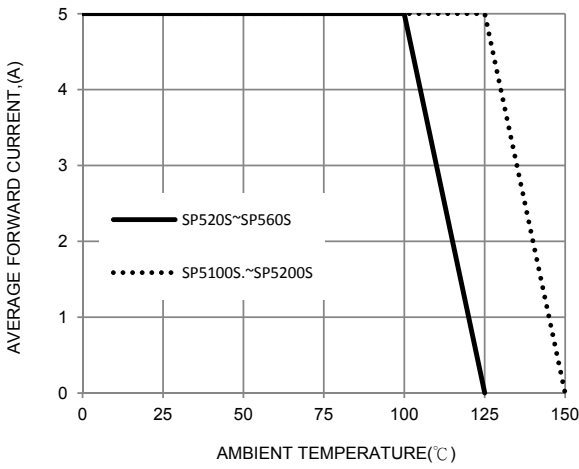


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

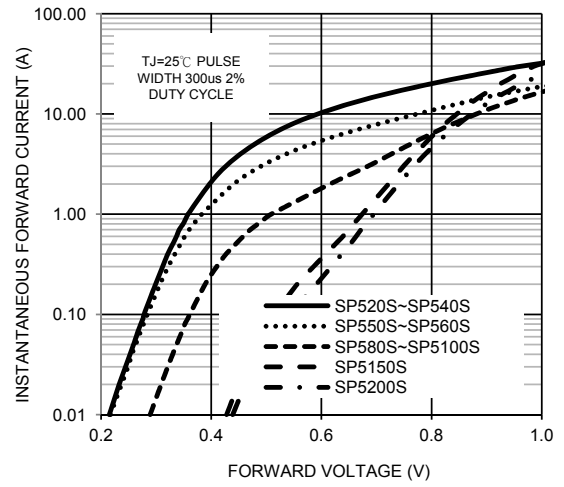


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

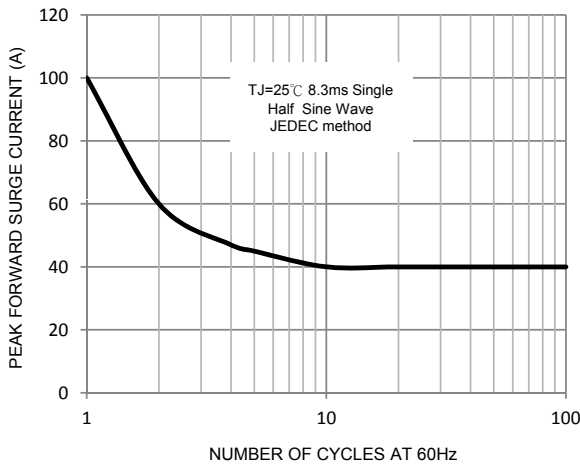


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

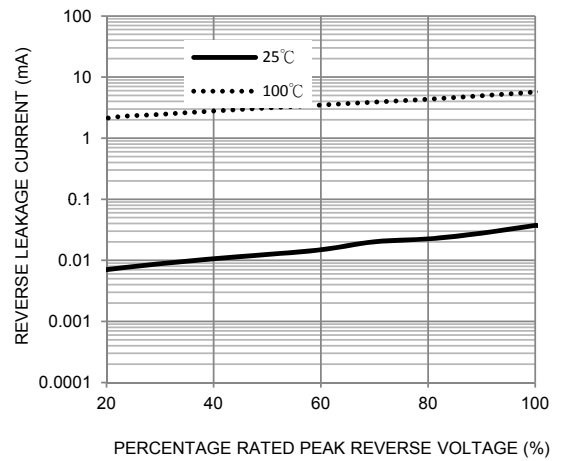


FIG. 5-TYPICAL JUNCTION CAPACITANCE

