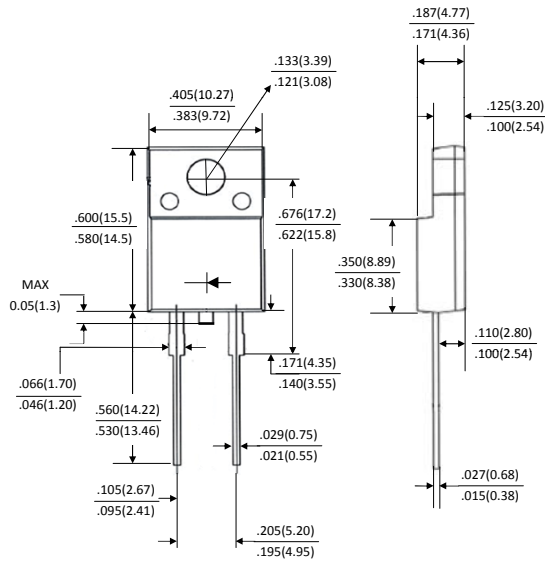




SP1020S thru SP10200S



Schottky Barrier Rectifiers



ITO-220AC

Dimensions in inches and (millimeters)



Ordering Information

Part Number	Remark
SP10xxS	General
SP10xxS-H	Halogen Free
SP10xxS-Q	Automotive

PRIMARY CHARACTERISTICS

I_F	10A
V_{RRM}	20~200V
I_{FSM}	150A
V_F	0.55V, 0.70V, 0.85V, 0.92V
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

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	SP10 20S	SP10 30S	SP10 40S	SP10 50S	SP10 60S	SP10 80S	SP10 100S	SP10 150S	SP10 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	10.0									A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150.0									A	
Maximum Instantaneous Forward Voltage $I_F=10A @ 25^\circ C$	V_F	0.55			0.70		0.85		0.92		V	
Maximum DC Reverse Current @ $T_c=25^\circ C$ at Rated DC Blocking Voltage @ $T_c=100^\circ C$	I_R	0.5 30					0.2 10					mA
Typical Junction Capacitance(NOTE1)	C_j	550			600		260		300		190	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



Schottky Barrier Rectifiers

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

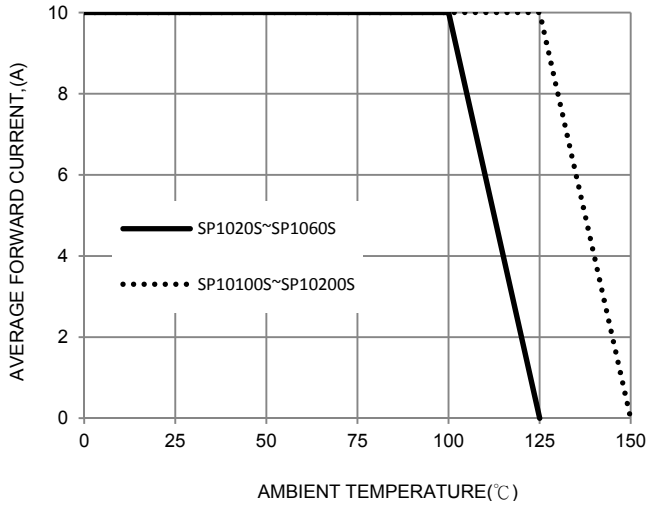


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

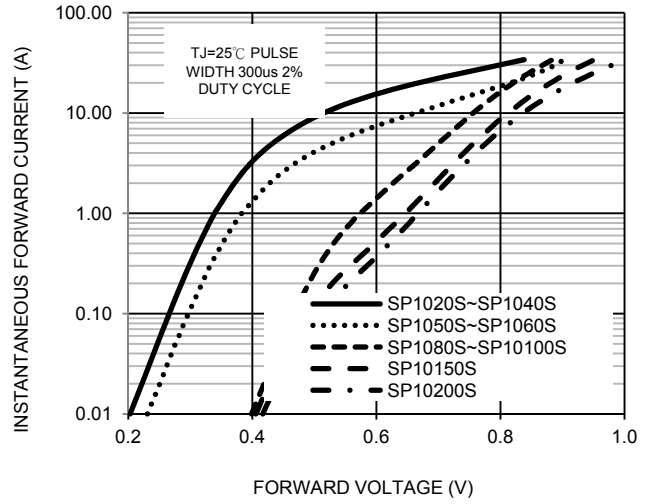


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

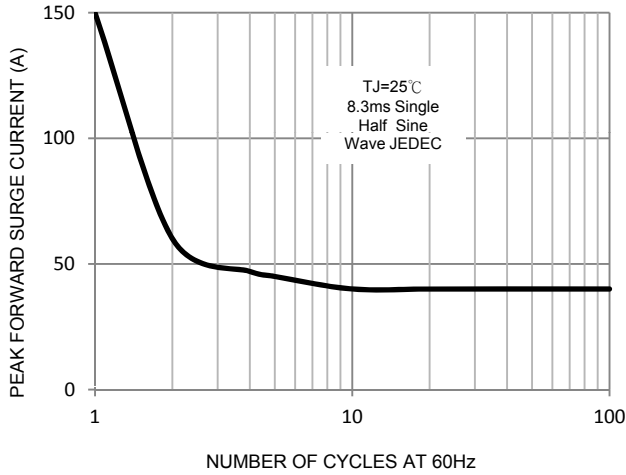


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

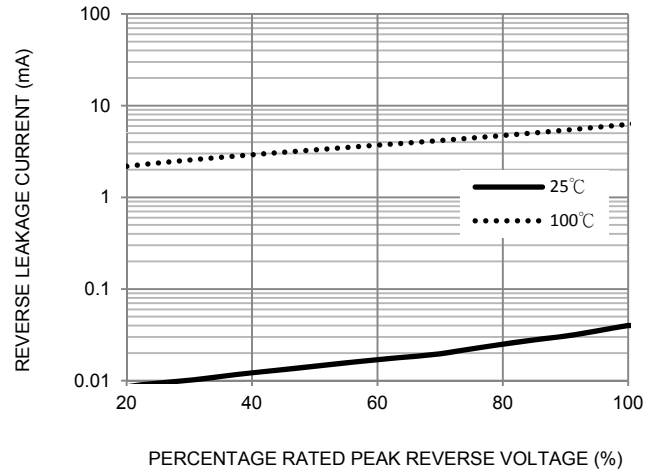


FIG. 5-TYPICAL JUNCTION CAPACITANCE

