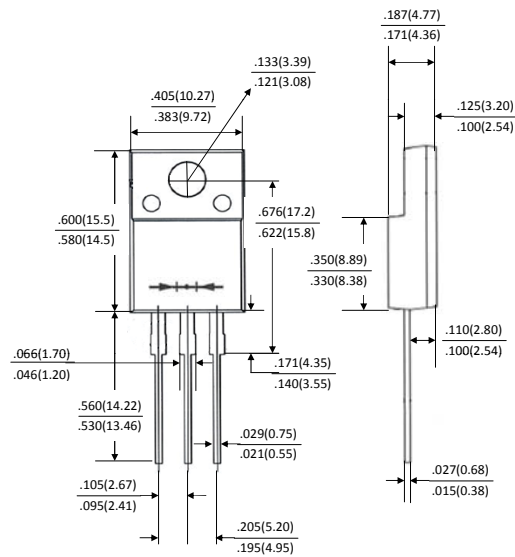




SP4020C thru SP40200C



Schottky Barrier Rectifiers



ITO-220AB

Dimensions in inches and (millimeters)

Ordering Information

Part Number	Remark
SP40xxC	General
SP40xxC-H	Halogen Free
SP40xxC-Q	Automotive

PRIMARY CHARACTERISTICS

I_F	40A
V_{RRM}	20~200V
I_{FSM}	250A
V_F	0.60V, 0.75V, 0.85V, 0.95V
$T_J \text{ max}$	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 Lead frame. Solderable per MIL-STD-202
- Weight: 1.689 grams (approximate)

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

PARAMETER	SYMBOL	SP40 20C	SP40 30C	SP40 40C	SP40 45C	SP40 50C	SP40 60C	SP40 80C	SP40 100C	SP40 150C	SP40 200C	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	45	50	60	80	100	150	200	V
Maximum RMS voltage	V _{RMS}	14	21	28	31.5	35	42	56	70	105	140	V
Maximum DC blocking voltage	V _{DC}	20	30	40	45	50	60	80	100	150	200	V
Maximum average forward rectified current (Total) (Per Leg)	I _F	40 20										A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	250.0										A
Maximum Instantaneous Forward Voltage IF=20A @ 25°C	V _F	0.60				0.75		0.85		0.95		V
Maximum DC Reverse Current @ Tc=25°C at Rated DC Blocking Voltage @ Tc=100°C	I _R	1 20						0.5 5				mA
Typical Junction Capacitance(NOTE1)	C _j	1,250				850		560		350		pF
Typical Thermal Resistance	R _{θJC}	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

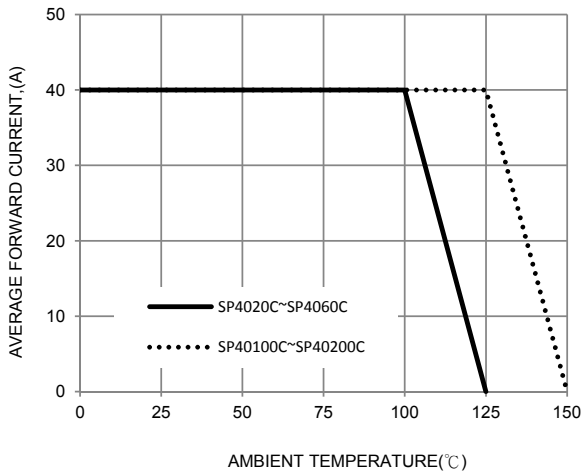


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

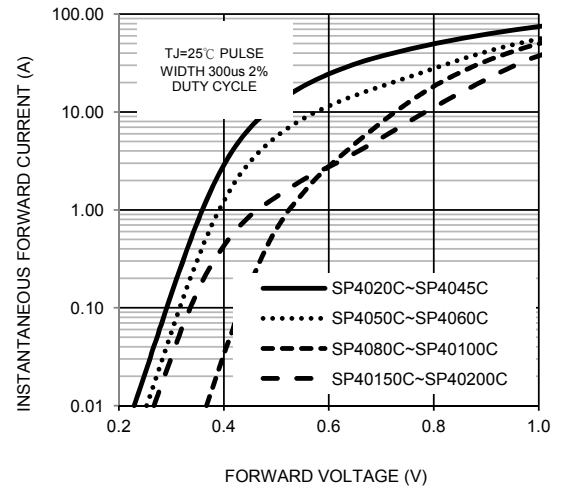


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

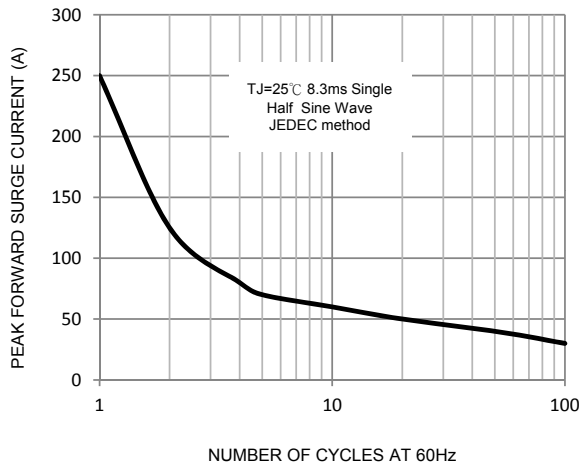


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

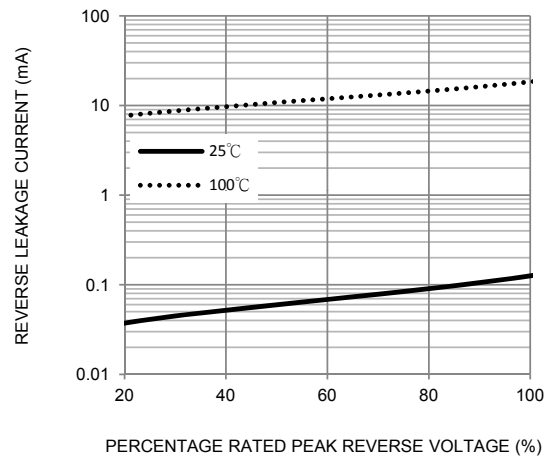


FIG. 5-TYPICAL JUNCTION CAPACITANCE

