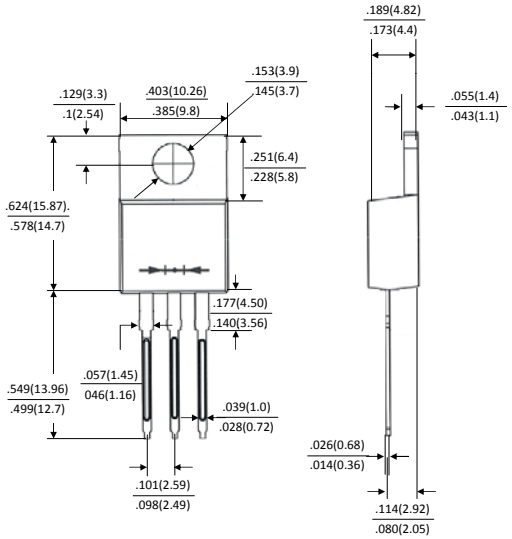
SR4020C thru SR40200C

Schottky Barrier Rectifiers



TO-220AB

Dimensions in inches and (millimeters)

Ordering Information	
Part Number	**Remark**
SR40xxC	General
SR40xxC-H	Halogen Free
SR40xxC-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 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 Date

- Case:TO-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: 1.948 grams (approximate)

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

PARAMETER	SYMBOL	SR40 20C	SR40 30C	SR40 40C	SR40 45C	SR40 50C	SR40 60C	SR40 80C	SR40 100C	SR40 150C	SR40 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	$R_{\theta JC}$	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

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FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

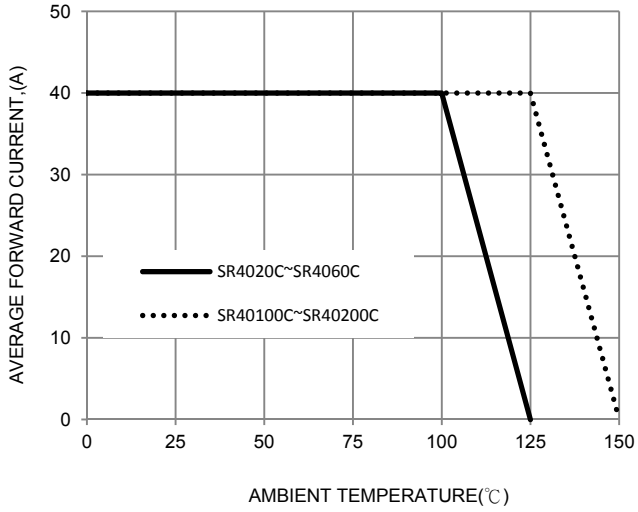

FIG. 2-TYPICAL FORWARD CHARACTERISTICS

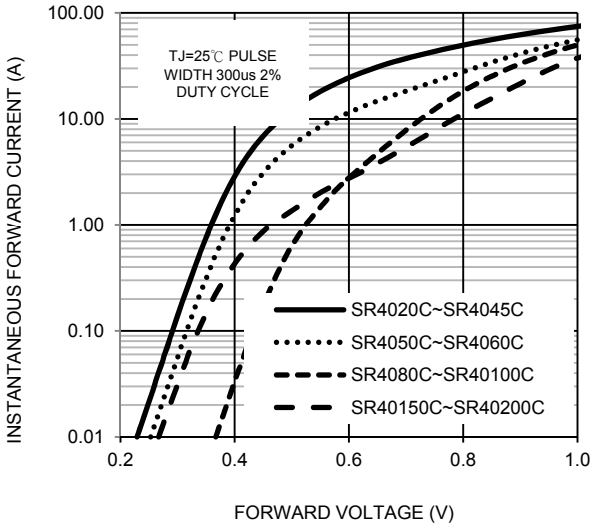

FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

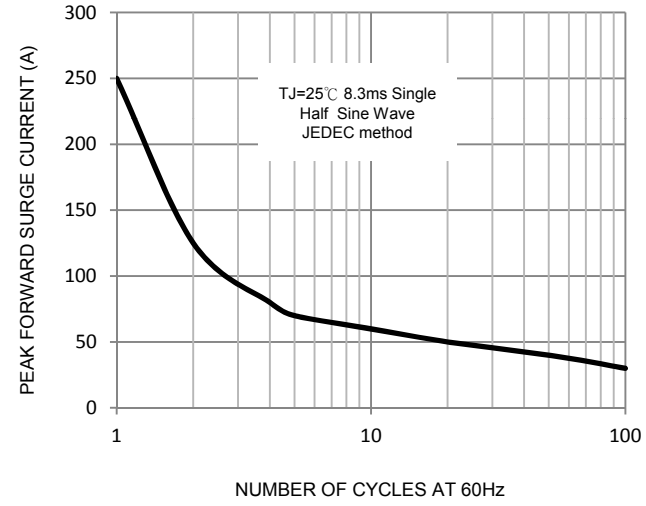

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

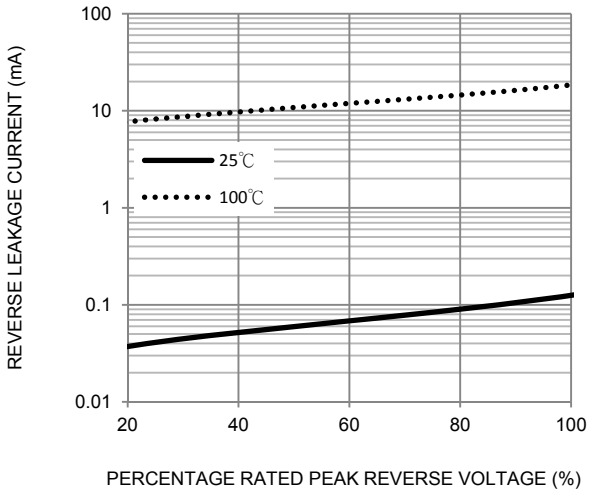

FIG. 5-TYPICAL JUNCTION CAPACITANCE