



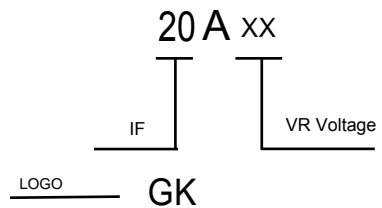
## FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

**VOLTAGE RANGE**  
50 to 1000 Volts  
**CURRENT**  
20.0 Ampere



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

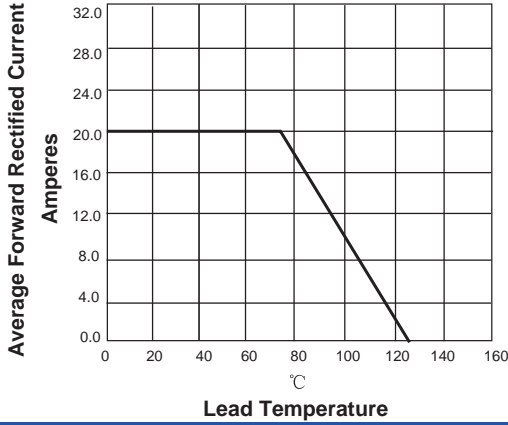
Rating 25°C ambient temperature unieess otherwies specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Parameter	SYMBOLS	20A05	20A1	20A2	20A3	20A4	20A5	20A6	20A8	20A10	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	300	400	500	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	350	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	300	400	500	600	800	1000	V
Maximum average forward rectified current	$I_{(AV)}$	20.0									A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	450.0									A
Maximum instantaneous forward voltage at 20.0A	$V_F$	1.1									V
Maximum DC reverse current $T_A = 25^\circ C$ at rated DC blocking voltage $T_A = 100^\circ C$	$I_R$	2.0 200									$\mu A$
Typical junction capacitance (Note1)	$C_J$	220.0									pF
Typical thermal resistance	$R_{qJA}$	40.0									$^\circ C/W$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +125									$^\circ C$

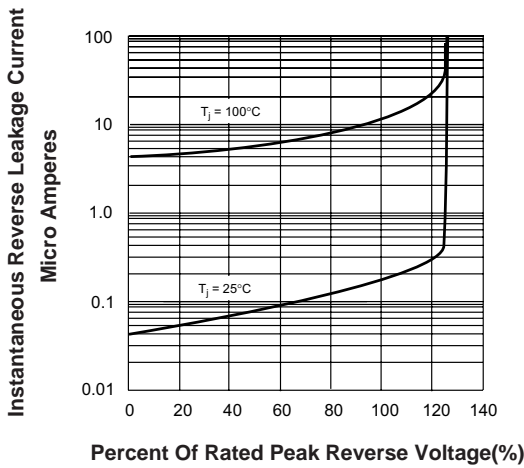
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

**RATING AND CHARACTERISTIC CURVES**

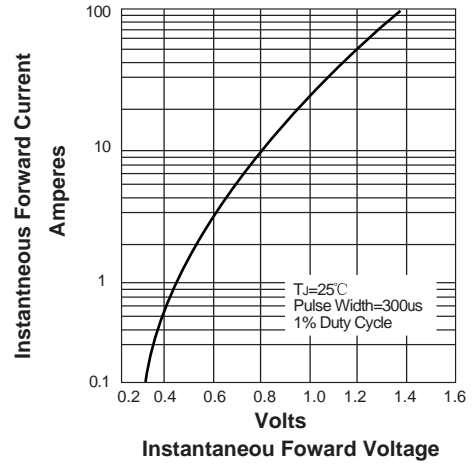
**FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE**



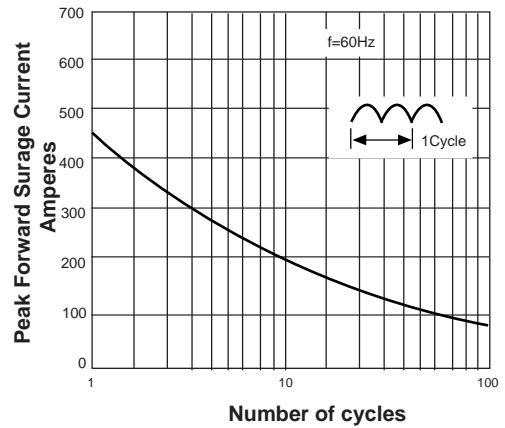
**FIG.3 - TYPICAL REVERSE CHARACTERISTICS**



**FIG.2-TYPICAL FORWARD CHARACTERISTICS**



**FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ( $T_{s(min)}$ )	+150 °C
	-Temperature Max( $T_{s(max)}$ )	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3 °C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature( $T_L$ )(Liquid us)	+217 °C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_p$ )		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp ( $t_p$ )		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp ( $T_p$ )		8 min. Max
Do not exceed		+260 °C



Package Dimensions & Suggested Pad Layout

