

## FEATURES

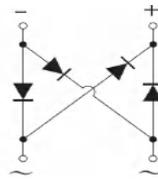
- \* Ideal for printed circuit board
- \* Reliable low cost construction utilizing molded plastic technique
- \* High surge current capability
- \* Polarity: Symbol molded on body
- \* Mounting position: Any

## VOLTAGE RANGE

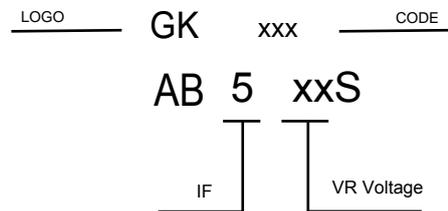
20 to 200 Volts

## CURRENT

5.0 Ampere



Internal Schematic



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

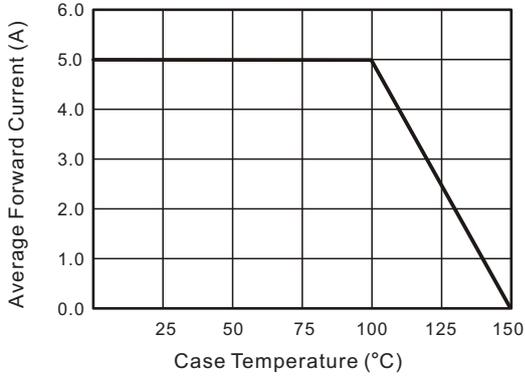
Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

TYPE NUMBER	AB52S	AB54S	AB56S	AB58S	AB510S	AB515S	AB520S	UNIT
Maximum Recurrent Peak Reverse Voltage	20	40	60	80	100	150	200	V
Maximum RMS Voltage	14	28	42	56	70	105	140	V
Maximum DC Blocking Voltage	20	40	60	80	100	150	200	V
Maximum Average Forward Rectified Current	5.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	120							A
Maximum Forward Voltage Drop per Bridge Element at 5.0A D.C.	0.55	0.7	0.85		0.9		V	
Maximum DC Reverse Current Ta=25°C	0.3		0.2		0.1		mA	
at Rated DC Blocking Voltage Ta=125°C	10		5		2		mA	
Typical Thermal Resistance R <sub>JA</sub> (Note 1)	75							°C/W
Operating Temperature Range, T <sub>J</sub>	-55 — +150							°C
Storage Temperature Range, T <sub>STG</sub>	-55 — +150							°C

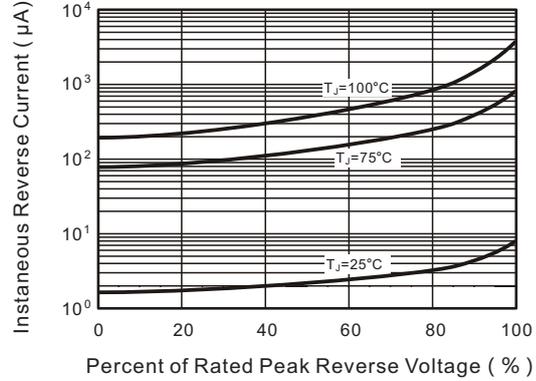
NOTE 1: Thermal Resistance Junction to Ambient.

**RATING AND CHARACTERISTIC CURVES**

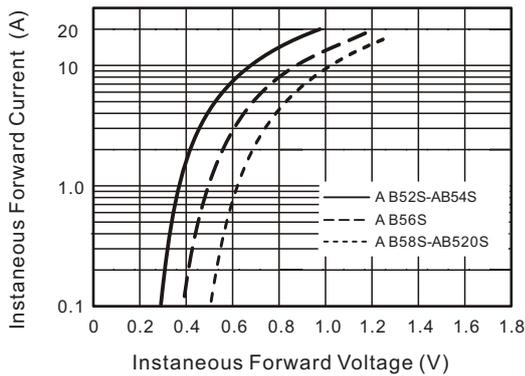
**Fig.1 Forward Current Derating Curve**



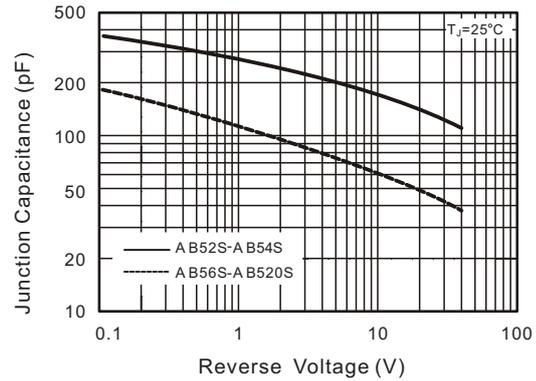
**Fig.2 Typical Reverse Characteristics**



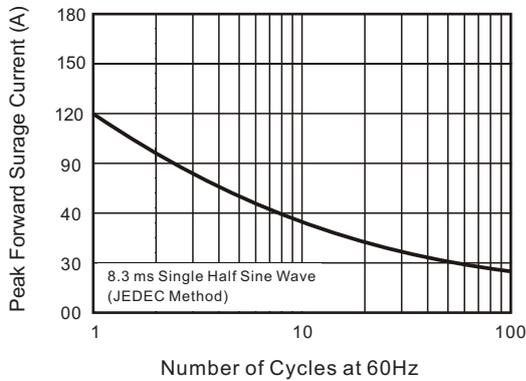
**Fig.3 Typical Forward Characteristic**



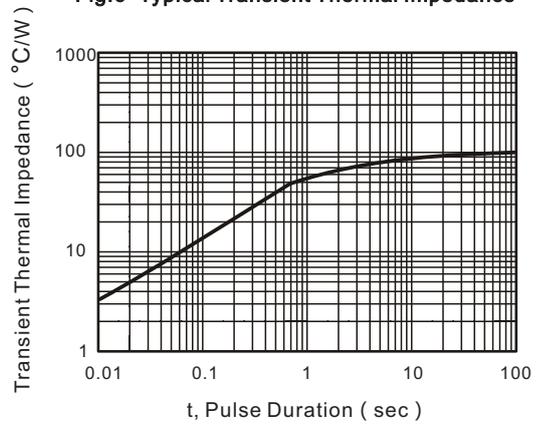
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

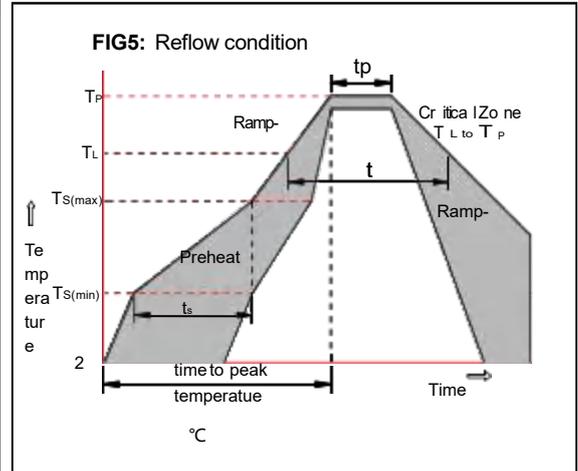


**Fig.6- Typical Transient Thermal Impedance**



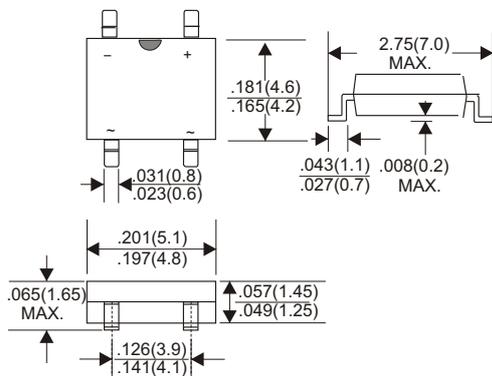
Soldering parameters

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

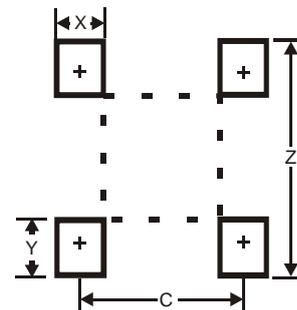


Package Dimensions & Suggested Pad Layout

ABS



Dimensions in inches and (millimeters)



Dimensions	
Z	8.4
X	1.0
Y	2.2
C	4.0

**Tape & reel specification**

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	8.00±0.20
		P2	2.00±0.20
		D0	1.60±0.15
		D1	1.60±0.15
		E	1.75±0.20
		F	5.50±0.15
		W	12.00±0.20
		A0	5.30±0.20
		B0	6.80±0.20
		K0	1.65±0.15
		T	0.23±0.10
		13" Reel	
		D3	73Min.
		D4	16.0±2.5
		W1	18.0±3.0
		Quantity: 5000PCS	