

Glass Passivated Bridge Rectifiers

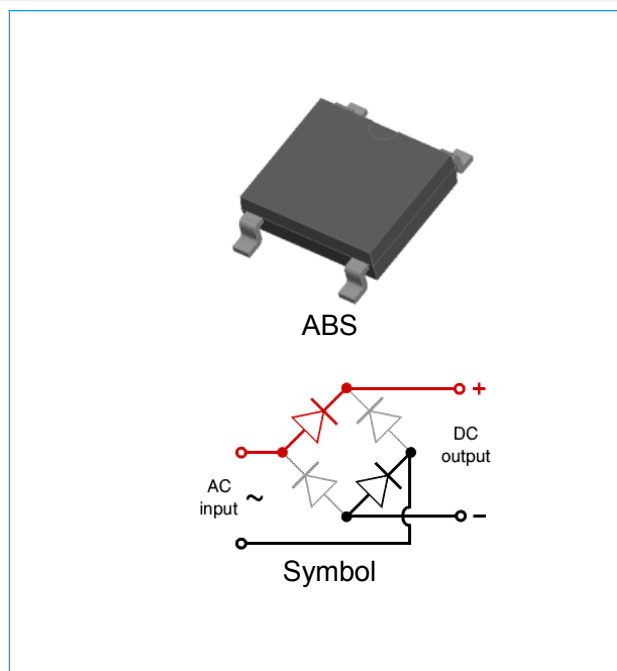
ABS16~ABS20

Features

- ◆ Glass passivated chip junction
- ◆ Lead free with comply in EU RoHS 2011/65/EU directives
- ◆ Ideal for printed circuit board
- ◆ Exceeds environmental standards of MIL-S-19500/228
- ◆ Plastic package has underwriters laboratory flammability classification 94V-0
- ◆ High surge forward current capability
- ◆ Low forward voltage drop
- ◆ General purpose use in AC/DC bridge full wave rectification for SMPS, lighting ballast, adapter,etc

Mechanical Data

- ◆ Case: ABS Molded plastic
- ◆ Terminals:Solder plated ,solderable per MIL-STD-750,method 2026
- ◆ Polarity:Polarity symbol marking on body
- ◆ Weight:0.12gram



Maximum Ratings and Thermal Characteristics (T_A=25 °C unless otherwise noted)

Parameter	Symbol	ABS16	ABS20	Units
Maximum repetitive peak reverse voltage	V _{RRM}	1600	2000	V
Maximum non-repetitive peak reverse voltage	V _{RSM}	1800	2100	V
Maximum RSM voltage	V _{RSM}	1120	1400	V
Maximum DC blocking voltage	V _{DC}	1600	2000	V
Average rectified output current at T _A =40°C	I _O	1.0		A
Peak forward surge current: 8.3 ms single half sine-wave superimposed on rated load only	I _{FSM}	30		A
Maximum forward voltage per diode @ I _F =1.0A	V _F	1.15		V
Maximum DC reverse current at rated DC blocking voltage	T _J =25°C	5.0		μA
	T _J =125°C	500		μA
Operating junction and storage temperature rang	T _J ,T _{STG}	-60 to +150		° C

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Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Figure 1 - Typical forward characteristics (25°C)

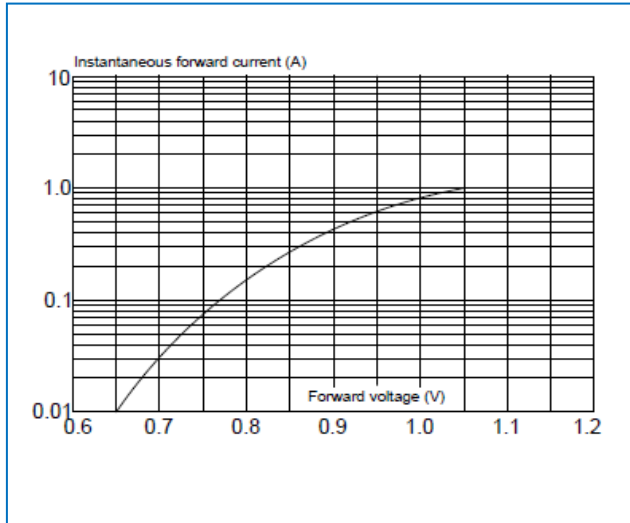


Figure 2 - Typical reverse characteristics

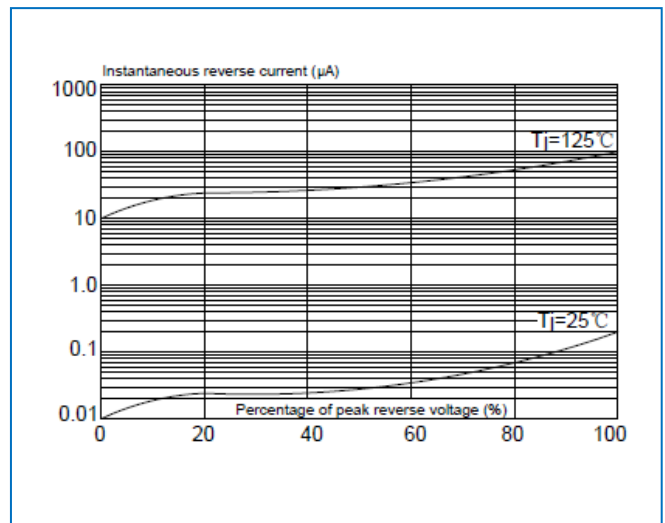


Figure 3 - Maximum non-repetitive peak forward surge current

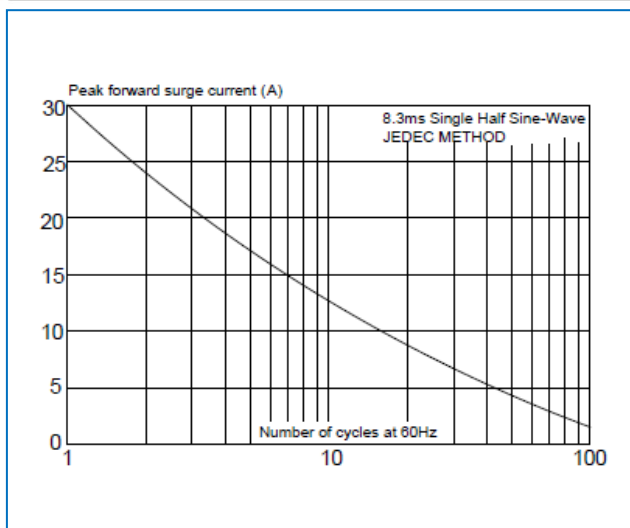
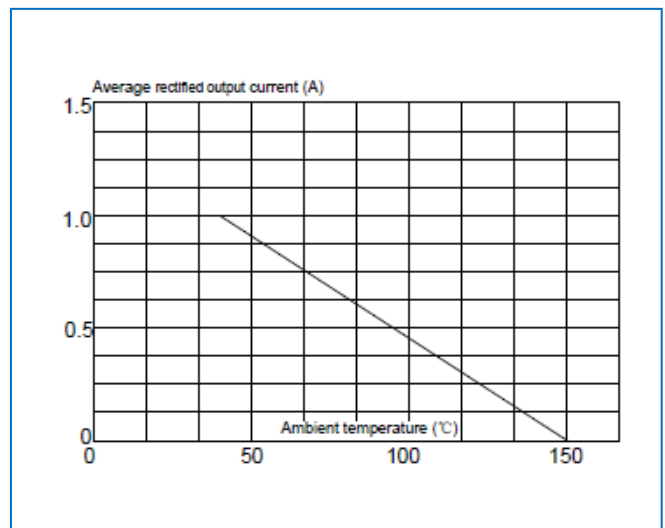


Figure 4 - Average rectified output current derating curve



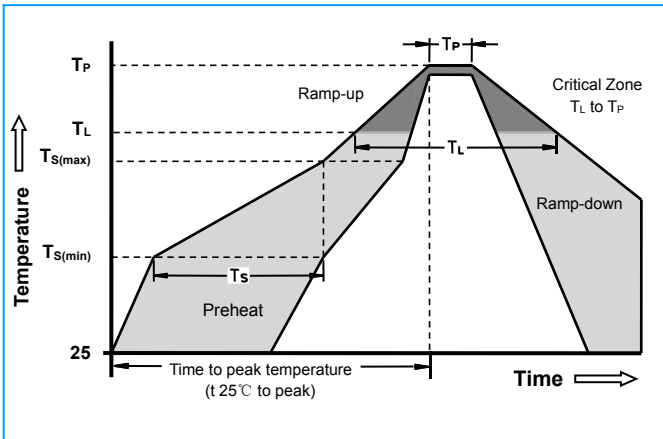
Thermal Resistances

Symbol	Parameter	ABS16	ABS20	Unit
$R_{th(j-a)}$	Junction to ambient	80		$^\circ\text{C}/\text{W}$

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Soldering Parameters

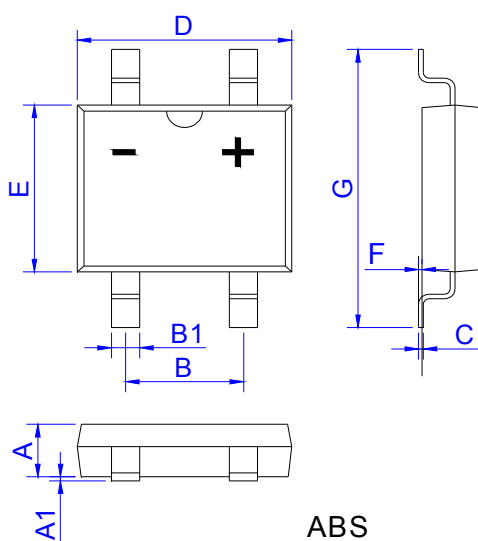


Reflow Condition		Lead-free assembly
Pre Heat	-Temperature Min ($T_{S(min)}$)	150°C
	-Temperature Max ($T_{S(max)}$)	200°C
	- Time (min to max) (t_s)	60 -180 Seconds
Average ramp up rate (Liquidus Temp T_L to peak)		3°C/second max
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Time (min to max) (t_s)	60 -150 Seconds
Peak Temperature (T_P)		260 +0/-5°C
Time within 5°C of actual peak Temperature (t_p)		20 -40 Seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes Max
Do not exceed		280°C

Package Information-ABS

Outline	Unit weight (g/pcs) typ.	Reel (pcs)	Per carton (pcs)
Taping	0.12	5,000	80,000

Package Mechanical data



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.30	1.50	0.051	0.059
A1	0.05	0.20	0.002	0.008
B		4.20		0.165
B1	0.50	0.70	0.020	0.028
C	0.10	0.30	0.004	0.012
D	4.80	5.20	0.189	0.205
E	4.20	4.60	0.165	0.181
F	0.05	0.15	0.002	0.006
G	6.00	6.40	0.236	0.252