



Surface Mount Glass Passivated Ultrafast Rectifier

Major Ratings and Characteristics

$I_{F(AV)}$	0.5 A
V_{RRM}	50 V to 400 V
I_{FSM}	10 A
t_{rr}	50 ns
V_F	1.25 V, 1.35 V
$T_j \text{ max.}$	175 °C



DO-213AA (GL34)

Patented*

*Glass-plastic encapsulation is covered by Patent No. 3,996,602, brazed-lead assembly to Patent No. 3,930,306

Features

- Cavity-free glass-passivated junction
- Ideal for automated placement
- Ultrafast reverse recovery time
- Low switching losses, high efficiency
- Meets environmental standard MIL-S-19500
- Meets MSL level 1, per J-STD-020C
- Solder Dip 260 °C, 40 seconds



Mechanical Data

Case: DO-213AA, molded epoxy over glass body
Epoxy meets UL-94V-0 Flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D

E3 suffix for commercial grade, HE3 suffix for high reliability grade (AEC Q101 qualified)

Polarity: Two bands indicate cathode end - 1st band denotes device type and 2nd band denotes repetitive peak reverse voltage rating

Typical Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive and Telecommunication

Maximum Ratings

$T_A = 25\text{ °C}$ unless otherwise specified

Parameter	Symbol	BYM07-50	BYM07-100	BYM07-150	BYM07-200	BYM07-300	BYM07-400	Unit
Fast efficient device: 1st band is Green		EGL34A	EGL34B	EGL34C	EGL34D	EGL34F	EGL34G	
Polarity color bands (2nd Band)		Gray	Red	Pink	Orange	Brown	Yellow	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	V
Maximum average forward rectified current at $T_T = 75\text{ °C}$	$I_{F(AV)}$	0.5						A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	10						A
Maximum full load reverse current, full cycle average at $T_A = 55\text{ °C}$	$I_{R(AV)}$	50						μA
Operating junction and storage temperature range	T_J, T_{STG}	- 65 to + 175						°C



Electrical Characteristics

$T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified

Parameter	Test condition	Symbol	BYM07-50 EGL34A	BYM07-100 EGL34B	BYM07-150 EGL34C	BYM07-200 EGL34D	BYM07-300 EGL34F	BYM07-400 EGL34G	Unit
Maximum DC reverse current at rated DC blocking voltage ⁽¹⁾	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 125\text{ }^\circ\text{C}$	I_R	5.0 50						μA
Maximum instantaneous forward voltage ⁽¹⁾	at 0.5 A	V_F	1.25				1.35		V
Max. reverse recovery time	at $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{rr} = 0.25\text{ A}$	t_{rr}	50						ns
Typical junction capacitance	at 4.0 V, 1 MHz	C_J	7.0						pF

Notes:

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

Thermal Characteristics

$T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	BYM07-50 EGL34A	BYM07-100 EGL34B	BYM07-150 EGL34C	BYM07-200 EGL34D	BYM07-300 EGL34F	BYM07-400 EGL34G	Unit
Maximum thermal resistance ^(1, 2)	$R_{\theta JA}$ $R_{\theta JT}$	150 70						$^\circ\text{C/W}$

Notes:

(1) Thermal resistance from junction to ambient, 0.24 x 0.24" (6.0 x 6.0 mm) copper pads to each terminal

(2) Thermal resistance from junction to terminal, 0.24 x 0.24" (6.0 x 6.0 mm) copper pads to each terminal

Ratings and Characteristics Curves

($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

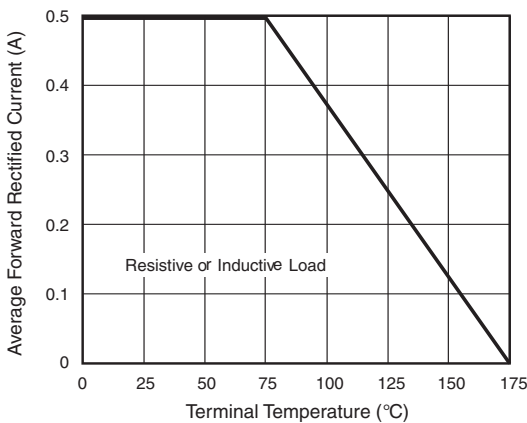


Figure 1. Forward Current Derating Curve

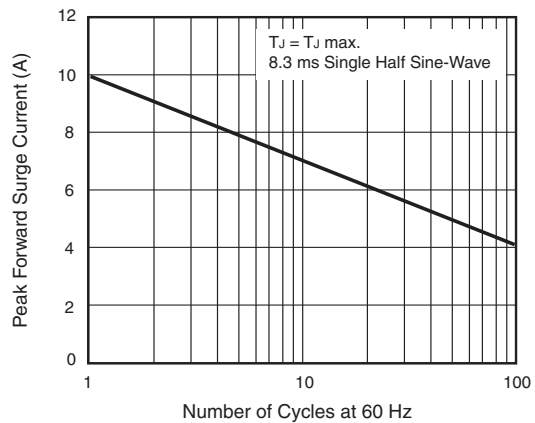


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

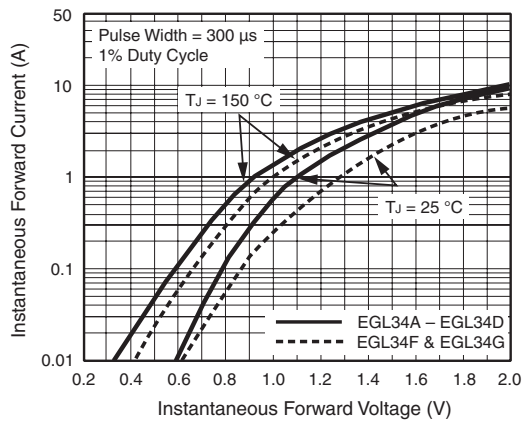


Figure 3. Typical Instantaneous Forward Characteristics

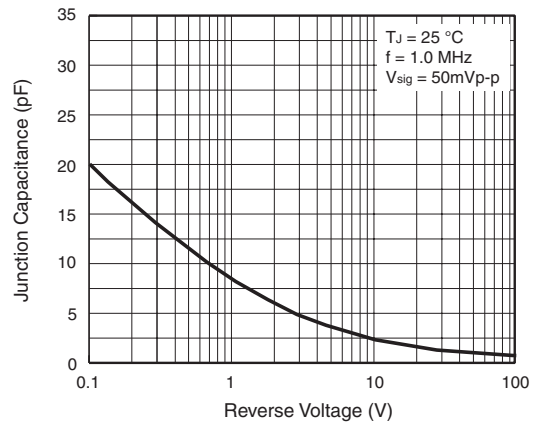


Figure 5. Typical Junction Capacitance

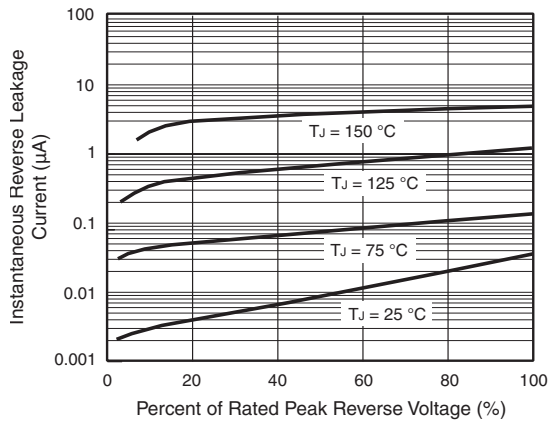


Figure 4. Typical Reverse Characteristics

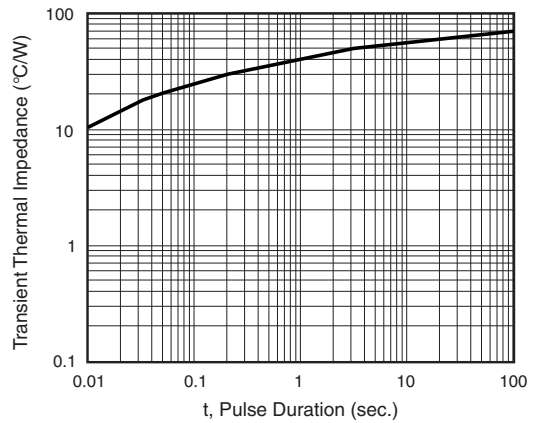
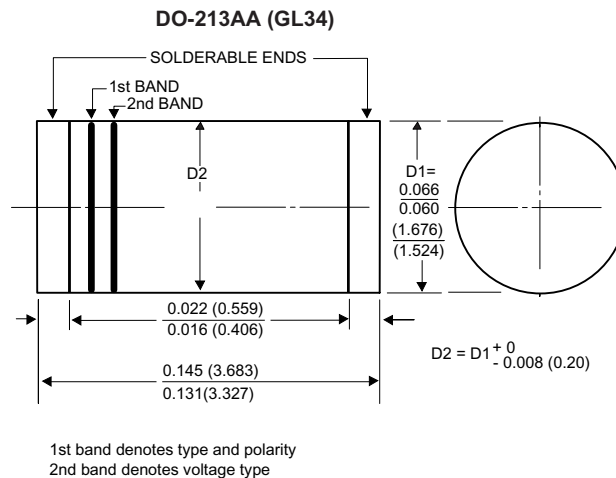


Figure 6. Typical Transient Thermal Impedance

Package outline dimensions in inches (millimeters)





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