Silicon Diode

EGL41D

200V / 1A

DATASHEET

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OEM – General Semiconductor

Source: General Semiconductor Databook 1998

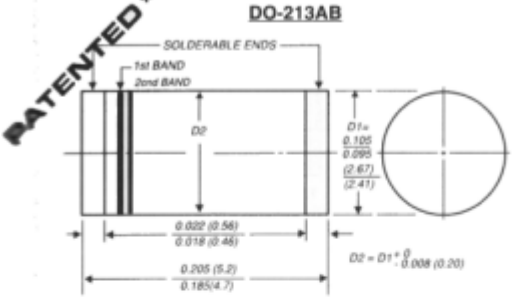
BYM12-50 THRU BYM12-400
EGL41A THRU EGL41G

SURFACE MOUNT GLASS PASSIVATED JUNCTION FAST EFFICIENT RECTIFIER

***Reverse Voltage** - 50 to 400 Volts* ***Forward Current** - 1.0 Ampere*

PATENTED*

DO-213AB



1st band denotes type and positive end (cathode)

Dimensions in inches and (millimeters)

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

SUPERECTIFIER®

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Capable of meeting environmental standards of MIL-S-19500
- For surface mount applications
- High temperature metallurgically bonded construction
- Glass passivated cavity-free junction
- Fast switching for high efficiency
- High temperature soldering guaranteed: 450°C/5 seconds at terminals. Complete device submersible temperature of 260°C for 10 seconds in solder bath

MECHANICAL DATA

Case: JEDEC DO-213AB molded plastic over glass body
Terminals: Plated terminals, solderable per MIL-STD-750, Method 2026
Polarity: Two bands indicate cathode end -1st band denotes device type and 2nd band denotes repetitive peak reverse voltage rating
Mounting Position: Any
Weight: 0.116 ounce, 0.0046 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	BYM12 -50	BYM12 -100	BYM12 -150	BYM12 -200	BYM12 -300	BYM12 -400	UNITS
Fast efficient device: 1st band is green		EGL41A	EGL41B	EGL41C	EGL41D	EGL41F	EGL41G	
Polarity color bands (2nd band)		GRAY	RED	PINK	ORANGE	BROWN	YELLOW	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	Volts
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	Volts
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	Volts
Maximum average forward rectified current at T_T=75°C	$I_{(AV)}$	1.0						Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0						Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.0				1.25		Volts
Maximum DC reverse current at rated DC blocking voltage T_A=25°C / T_A=125°C	I_R	5.0 / 50.0						µA
Maximum reverse recovery time (NOTE 1)	t_{rr}	50.0						ns
Typical junction capacitance (NOTE 2)	C_J	20.0				14.0		pF
Maximum thermal resistance (NOTE 3) / (NOTE 4)	$R_{\theta JA}$ / $R_{\theta JT}$	60.0 / 30.0						°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175						°C

NOTES:
(1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(3) Thermal resistance from junction to ambient, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal
(4) Thermal resistance from junction to terminal, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal

RATINGS AND CHARACTERISTIC CURVES BYM12-50 THRU BYM12-400, EGL41A THRU EGL41G

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

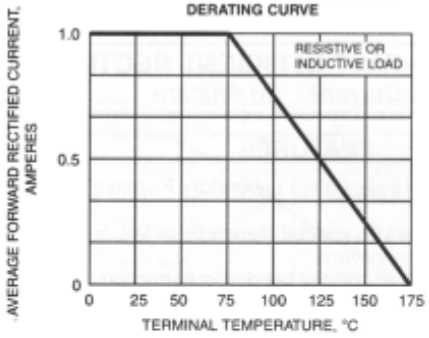


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

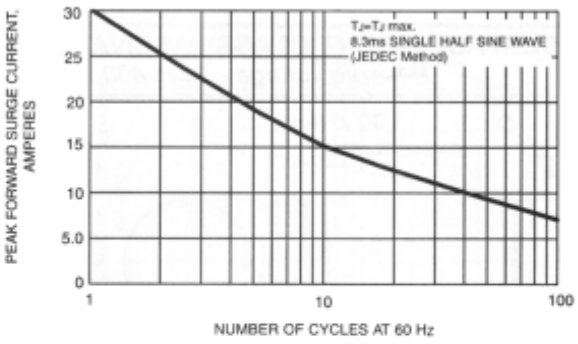


FIG. 3 -TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

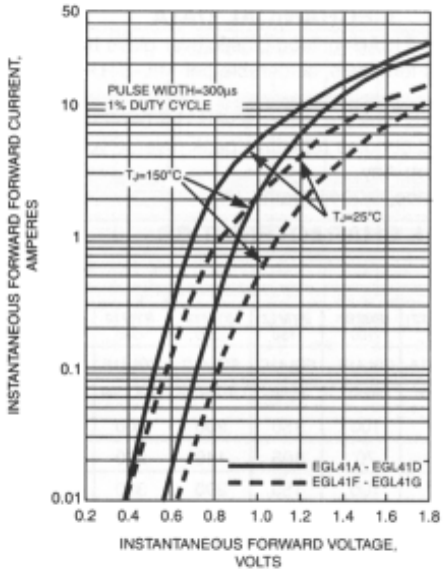


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

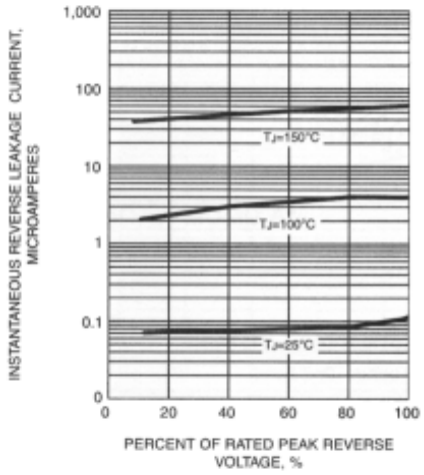


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

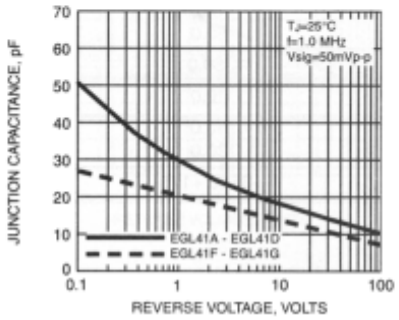


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE