

1A,50-1000V Standard Rectifiers

Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- For general purpose applications
- Moisture sensitivity: level 1, per J-STD-020
- For fast switching and low logic level applications
- High temperature soldering guaranteed: 260°C/10 seconds



A-405

Applications

- Small battery charger, Power supplies

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	RL101G	RL102G	RL103G	RL104G	RL105G	RL106G	RL107G	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	I _{F(AV)}	1							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	30							A
Operating junction temperature range	T _J	-55 to +150							°C
Storage temperature range	T _{STG}	-55 to +150							°C

Thermal-Mechanical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	60	°C /W
Thermal Resistance, Junction to Case	R _{θJC}	30	°C /W
Thermal Resistance, Junction to Lead	R _{θJL}	24	°C /W



Electrical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	RL101G	RL102G	RL103G	RL104G	RL105G	RL106G	RL107G	Unit
Forward Drop Voltage	V _F	I _F =1A				1.10				V
Reverse leakage current @V _R	I _R	T _J =25°C				5				uA
		T _J =125°C				100				
Typical junction capacitance	C _J	4.0 V 1 MHz				15				pF
Typical reverse recovery time	trr	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A				1				uS

Note:

1. Valid provided that leads at a distance of 9.5 mm from case are kept at ambient temperature.

Ratings and Characteristics Curves

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

FIG.1-FORWARD CURRENT DERATING CURVE

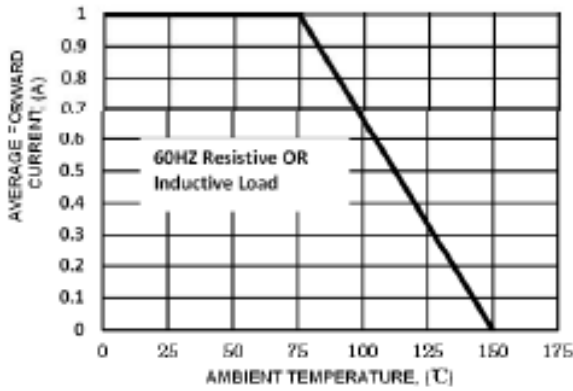


FIG 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

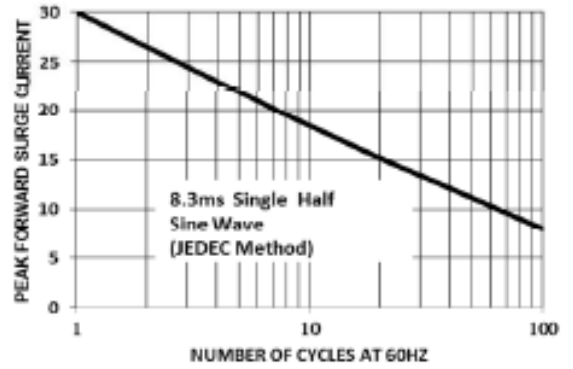


FIG 3-Typ INSTANTANEOUS FORWARD CHARACTERISTICS

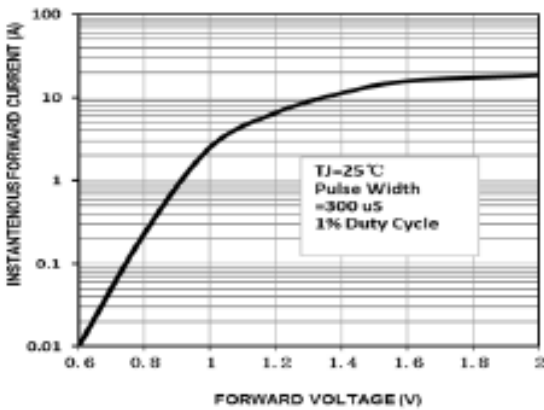


FIG4 Typ JUNCTION CAPACITANCE

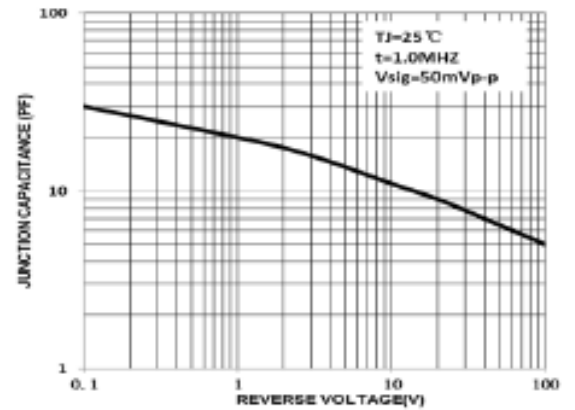


FIG5-TYPICAL REVERSE CHARACTERISTICS

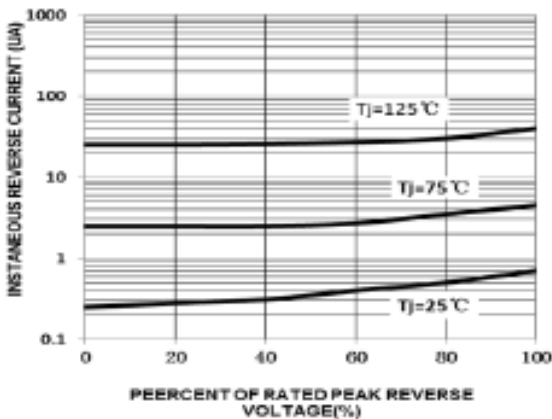
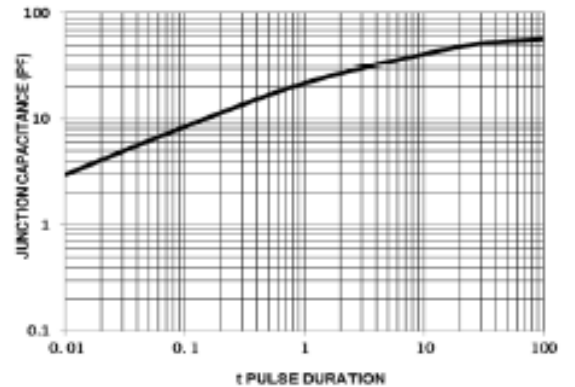


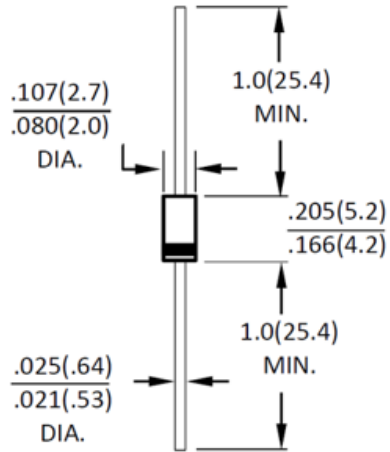
FIG 6- TYPICAL TRANSIENT THERMAL IMPEDANCE



Package Outline Dimensions

in inches (millimeters)

A-405



Dimensions in inches and (millimeters)

Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.11.27	Modify document format

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