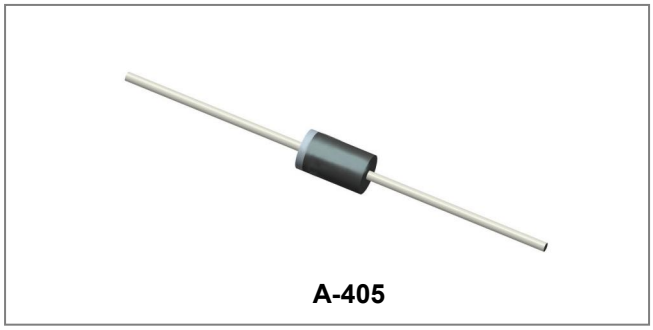
Technical Data
Data Sheet N0457, Rev. A

RL101F THRU RL107F

FAST RECOVERY RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere



A-405

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 260 C/10 seconds,0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram

Mechanical Data

- Case: A-405 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight:0.008 ounce, 0.23 grams

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	RL 101F	RL 102F	RL 103F	RL 104F	RL 105F	RL 106F	RL 107F	Units
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 0.375"(9.5mm) lead length at T_A=75℃	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.3							V
Maximum DC reverse current T_A=25 ℃ at rated DC blocking voltage T_A=100 ℃	I_R	5.0 50.0							μA
Maximum Reverse Recovery Time (Note 1)	Trr	150				250	500		ns
Typical Junction Capacitance (Note 2)	C_J	15.0							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	50.0							°C/W
Junction Temperature	T_J	-65 to +150							°C
Storage Temperature Range	T_{STG}	-65 to +150							°C

Note: 1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
3. Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length, P.C.B. mounted

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Ratings and Characteristics Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

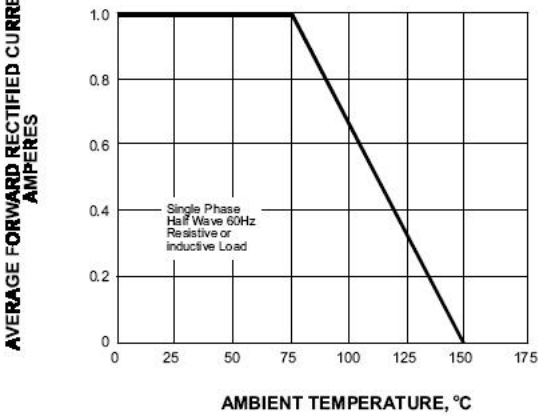


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

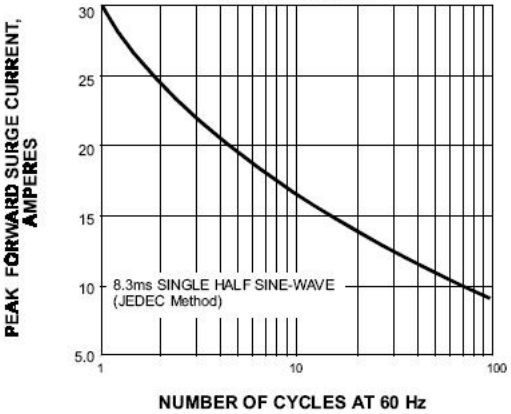


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

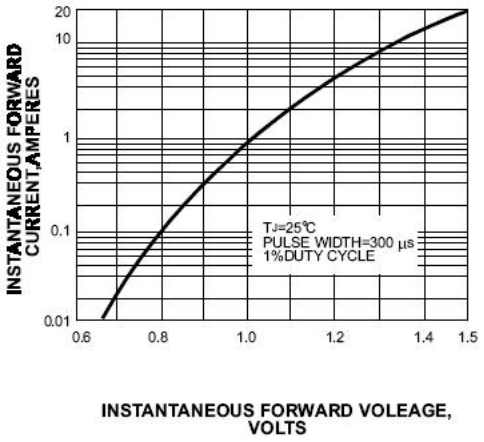


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

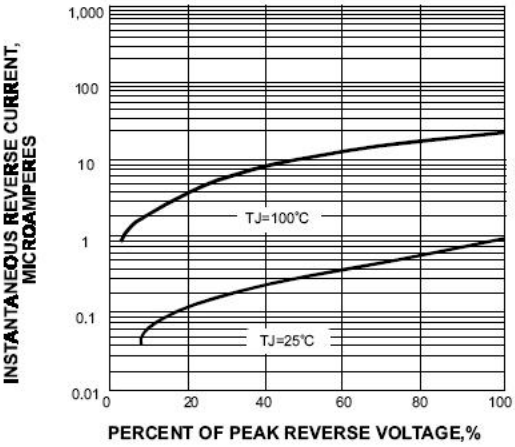


FIG. 5-TYPICAL JUNCTION CAPACITANCE

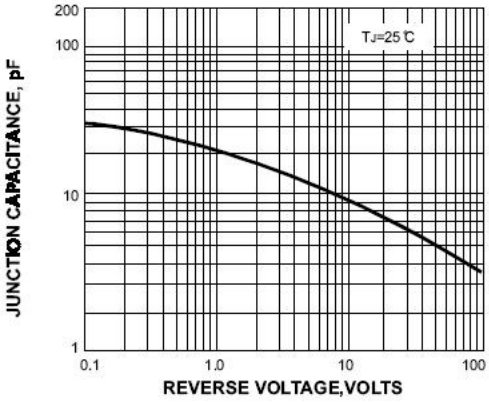
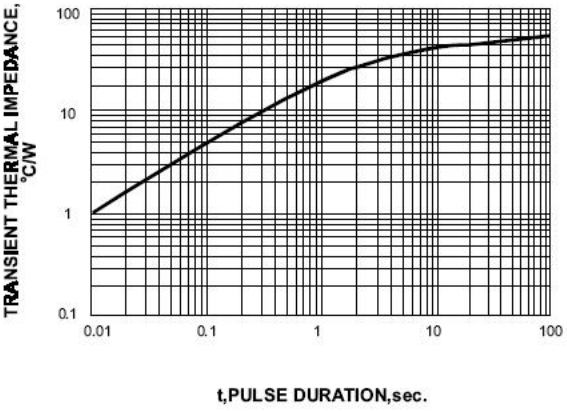


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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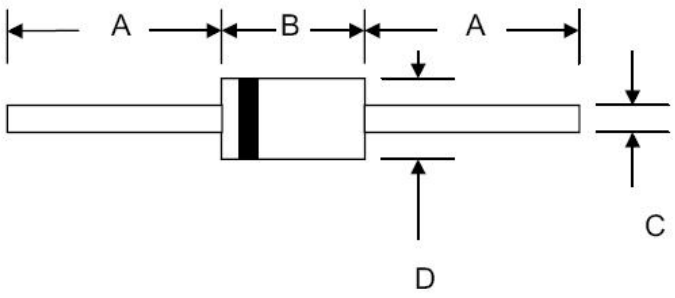
Mechanical Dimensions A-405



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	4.20	5.20	0.166	0.205
C	0.55	0.65	0.021	0.025
D	2.00	2.70	0.080	0.107

Ordering Information

Device	Package	Shipping
RL101F-RL107F	A-405 (Pb-Free)	5000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

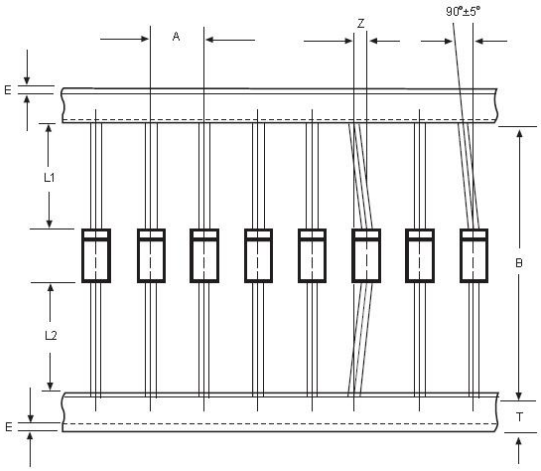
Marking Diagram

Where XXXXX is YYWWL

RL101F = Part Name
SSG = SSG
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification A-405



SYMBOL	Millimeters	
	Min.	Max.
A	4.50	5.50
B	25.3	25.5
Z	1.20	1.30
T	5.5	6.5
E	-	0.80
IL1-L2I	-	1.0

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