

# RL1601CT THRU RL1607CT

## GLASS PASSIVATED SILICON RECTIFIERS

Reverse Voltage – 50 to 1000 Volts

Forward Current – 16.0 Amperes

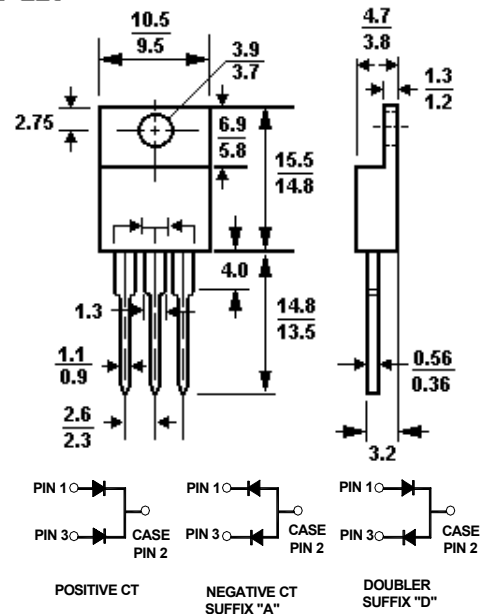
### Features

- Low forward voltage drop
- High current capability
- High capability
- High surge current capability

### Mechanical Data

- **Case:** Molded plastic, TO-220
- **Terminals:** leads solderable per MIL-STD-202, method 208 guaranteed
- **Polarity:** As marked
- **Mounting Position:** Any

TO-220



### Absolute Maximum Ratings and Characteristics

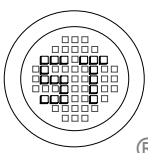
### Dimensions in mm

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

	Symbols	RL 1601CT	RL 1602CT	RL 1603CT	RL 1604CT	RL 1605CT	RL 1606CT	RL 1607CT	Units
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward Rectified current 0.375"(9.5mm) Lead Length at $T_C = 100^\circ C$	$I_{(AV)}$	16.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150							Amps
Maximum forward voltage at 8.0A DC and 25°C	$V_F$	1.1							Volts
Typical junction Capacitance (Note1)	$C_J$	50							pF
Typical thermal resistance (Note2)	$R_{\theta JC}$	3.0							°C/W
Maximum reverse current at rated DC blocking voltage	@ $T_C = 25^\circ C$	10							µAmps
	@ $T_C = 125^\circ C$	250							µAmps
Operating and storage temperature range	$T_J, T_S$	-55 to +150							°C

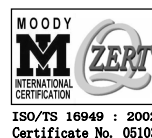
Notes :1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2. Thermal resistance from junction to case per leg mounted on heatsink.



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001  
Certificate No. 7116



ISO 9001 : 2000  
Certificate No. 558-199-02-01

Dated : 18/12/2003

# RL1601CT THRU RL1607CT

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

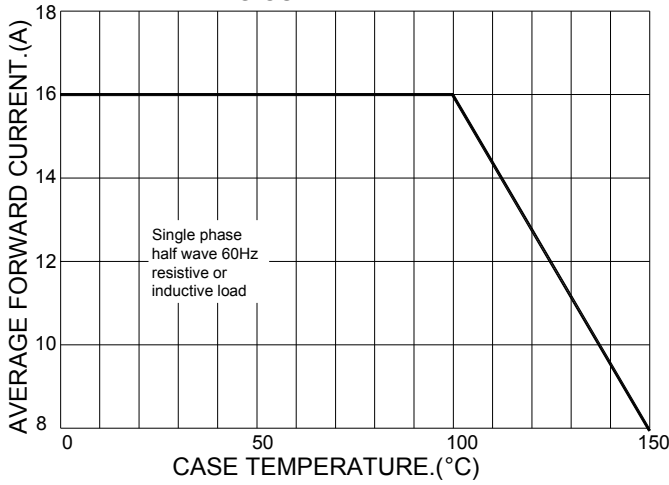


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

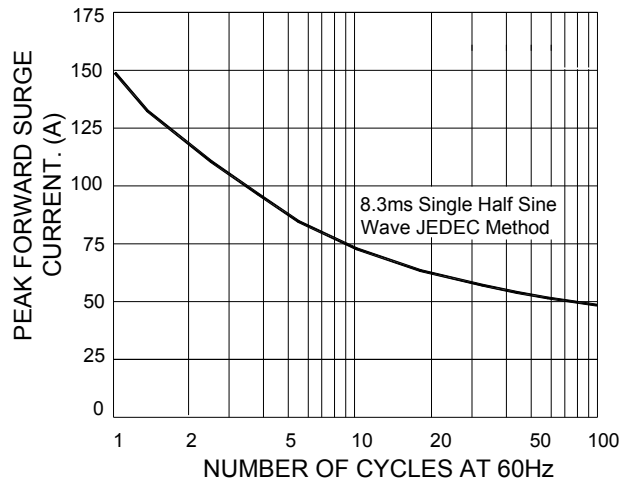


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

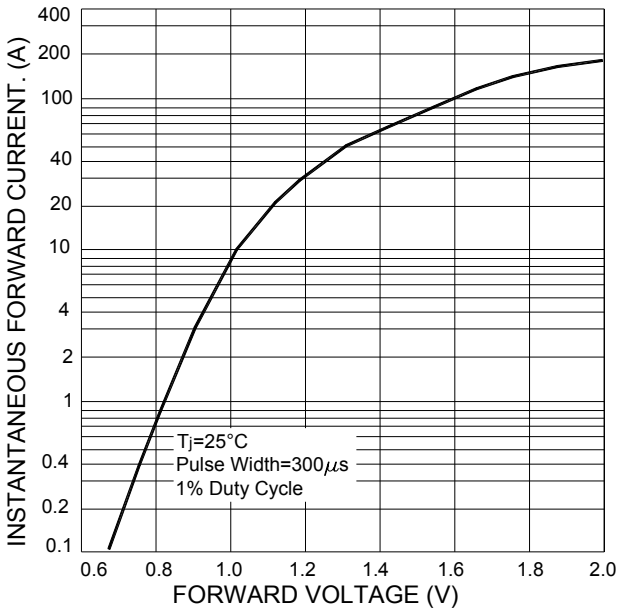


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

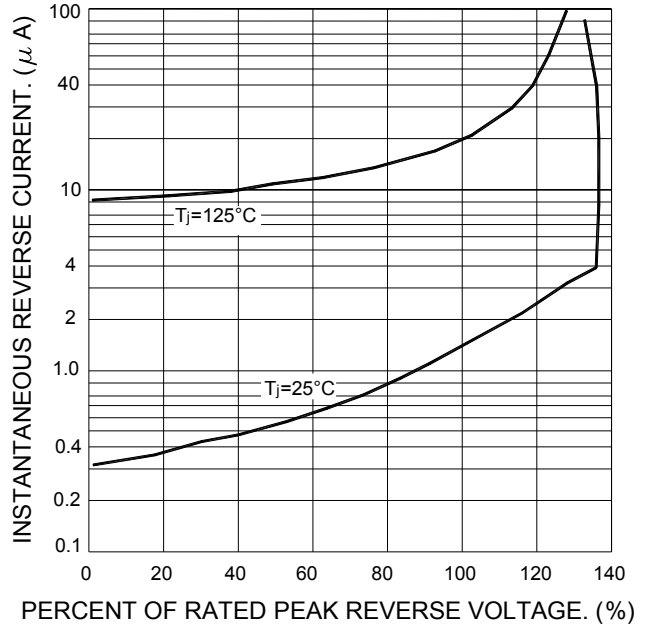
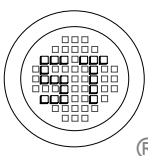
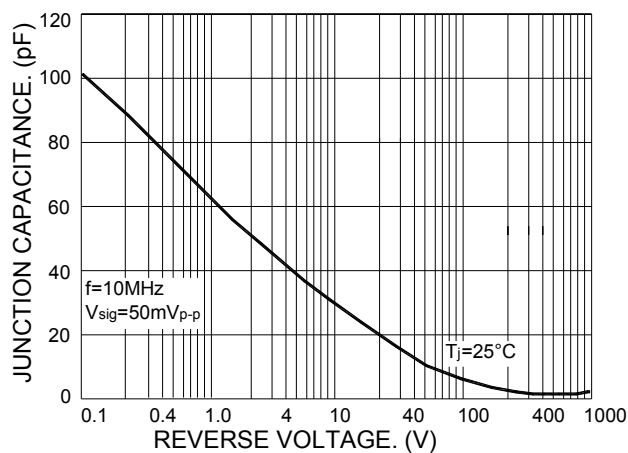
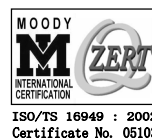


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001  
Certificate No. 7116



ISO 9001 : 2000  
Certificate No. 558-199-002-01

Dated : 18/12/2003