

GLASS PASSIVATED SILICON RECTIFIER

VOLTAGE RANGE 50 to 800 Volts CURRENT 16 Amperes

FEATURES

- * Low power loss, high efficiency
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * High surge capability
- * High reliability

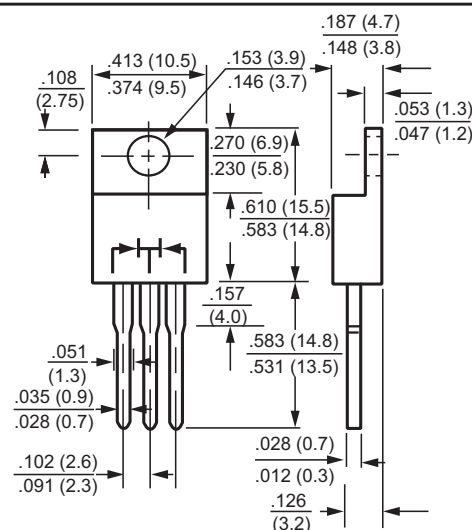
MECHANICAL DATA

- * Case: TO-220 molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 2.24 grams
- * Polarity: As marked

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TO-220



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

RATINGS	SYMBOL	RL1601C	RL1602C	RL1603C	RL1604C	RL1605C	RL1606C	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	Volts
Maximum Average Forward Rectified Current $T_C = 100^\circ\text{C}$ (Note 1)	I_O	16.0						Amps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150						Amps
Typical Current Square Time	I^2T	93.4						A^2S
Typical Thermal Resistance	$R_{\theta JC}$	3.0						$^\circ\text{C}/\text{W}$
Typical Junction Capacitance (Note 2)	C_J	40						pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150						$^\circ\text{C}$

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

CHARACTERISTICS	SYMBOL	RL1601C	RL1602C	RL1603C	RL1604C	RL1605C	RL1606C	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC	V_F	1.0						Volts
Maximum DC Reverse Current	I_R	2						uAmps
at Rated DC Blocking Voltage								
		50						

- NOTES : 1. Case Temperature Measured at Metal Tab.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Suffix "A" = Common Anode.

RATING AND CHARACTERISTIC CURVES (RL1601C THRU RL1606C)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

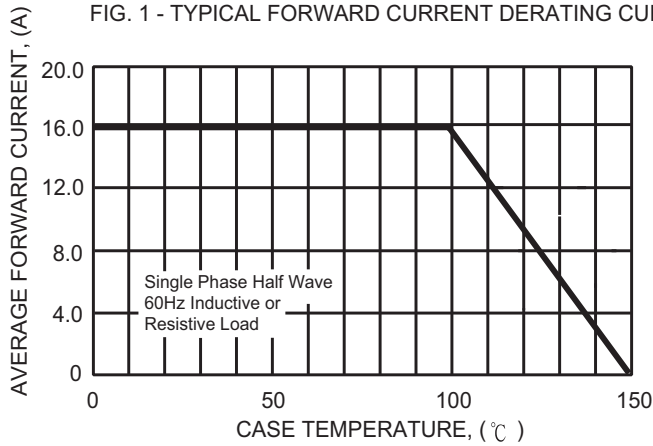


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

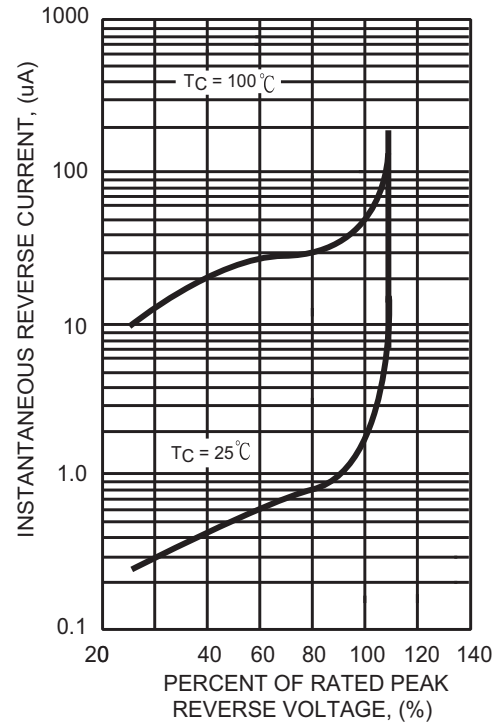


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

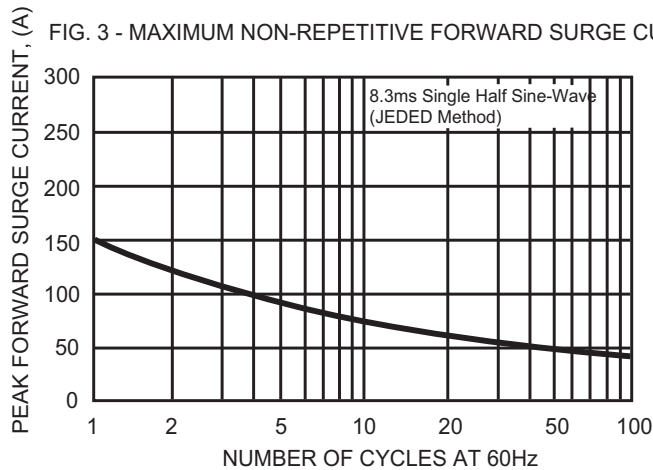


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

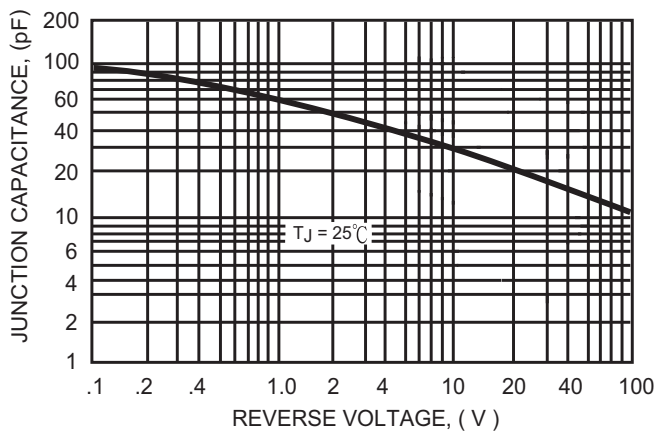
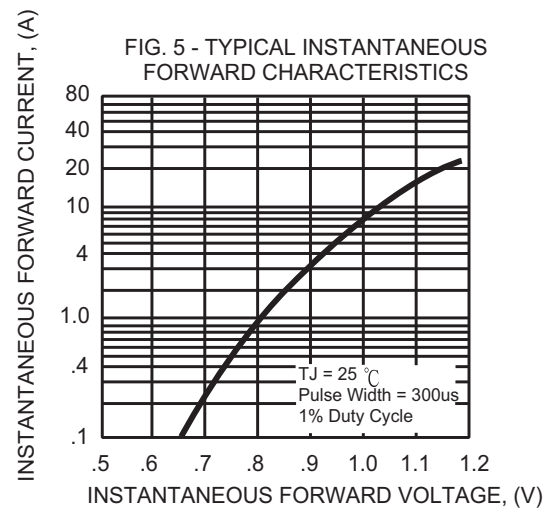


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

BULK PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
R-1	-B	1,000	194*84*21	465*220*260	50,000	11.74
A-405	-B	1,000	194*84*21	465*220*260	50,000	15.64
DO-41	-B	1,000	194*84*21	465*220*260	50,000	19.64
DO-15	-B	500	194*84*21	465*220*260	25,000	12.84
R-3	-B	500	194*84*21	465*220*260	25,000	17.36
DO-201AD	-B	500	300*73*40	347*320*271	12,000	16.63
R-6	-B	200	300*73*40	347*320*271	4,800	12.87
RS-1	-B	600	236*236*34	502*255*176	4,800	8.50
RB-15	-B	1,000	165*252*59	347*320*271	10,000	12.05
WOM	-B	600	165*252*59	347*320*271	6,000	11.00
RC-2	-B	600	165*252*59	347*320*271	6,000	10.30
RS-2L	-B	400	210*160*52	465*220*260	4,000	14.20
RS-4L	-B	300	225*157*50	502*251*126	1,800	11.30
RS-6/-8	-B	200	236*236*34	502*255*176	1,600	14.50
BR-3	-B	200	206*208*55	465*220*260	1,600	5.94
BR-6	-B	200	206*208*55	465*220*260	1,600	7.32
BR-8/-10	-B	200	236*236*50	497*251*288	2,000	12.24
BR-15/-25/-35(W)	-B	50	206*208*57	465*220*260	400	14.40
MB-15/-25/-35(W)	-B	50	206*208*57	465*220*260	400	16.26
MP-15/-25/-35(W)	-B	50	206*208*57	465*220*260	400	8.13
WB	-B	1,000	236*236*50	497*251*288	10,000	---

TUBE PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	WEIGHT(Kg)
TO-220(A)	-C	2,000	550*140*92	572*308*126	4,000	12.24
D2PAK	-C	2,000	550*140*92	572*308*126	4,000	10.50
TO-247	-C	900	550*140*92	572*308*126	1,800	10.46
BDB	-C	2,000	450*140*84	466*305*295	12,000	14.10
DB-1	-C	2,500	450*140*84	466*305*295	15,000	14.22
DB-S	-C	4,000	450*140*84	466*305*295	24,000	18.44
RS-2M	-C	1,350	540*118*118	560*256*146	2,700	12.80
RS-4M/-10M	-C	900	540*118*118	560*256*146	1,800	14.15
RS-6M/-25M	-C	600	490*135*110	510*290*140	1,200	14.40
RBU4M	-C	1,000	490*135*110	510*290*140	2,000	13.60

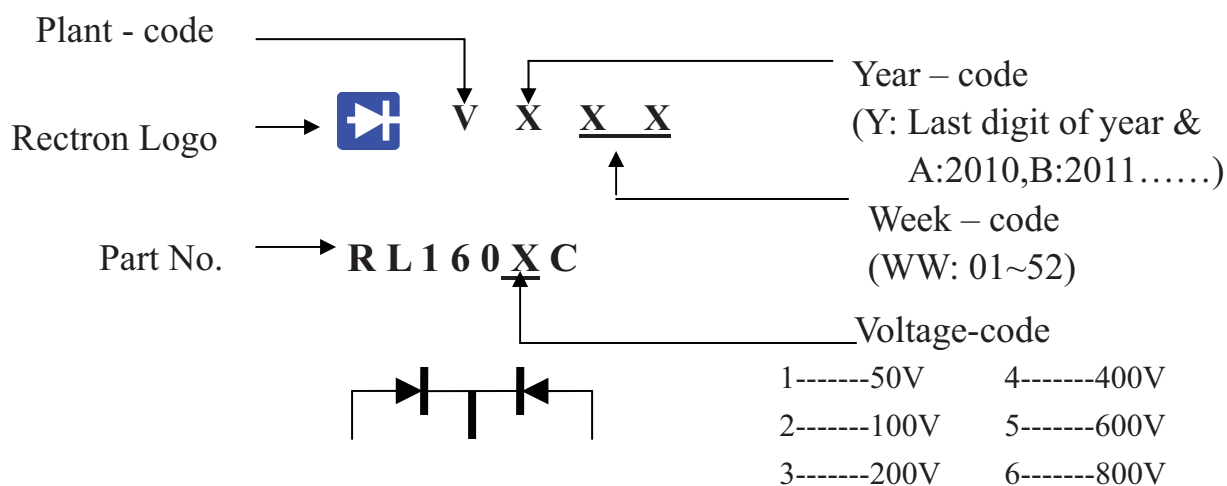


Attachment information about RL160XC

1. Internal Circuit



2. Marking on the body



3. Items marked on the inner box and carton

3.1 On the box (for -C)

CUSTOMER
TYPE
LOT NO.
QUANTITY
Q.A.
DATE

3.2 On the carton

CUSTOMER
TYPE
QUANTITY
LOT NO.
REMARK

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