

**SUPER FAST
GLASS PASSIVATED RECTIFIERS**

REVERSE VOLTAGE – 500 to 600 Volts
FORWARD CURRENT – 16 Amperes

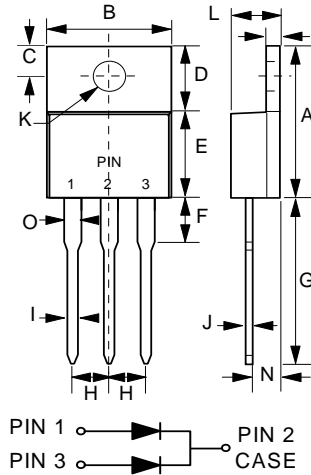
FEATURES

- Glass passivated chip
- Super fast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- High surge capacity

MECHANICAL DATA

- Case :TO-220AB molded plastic
- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free"
- Polarity : As marked on the body
- Weight : 0.072 ounces, 2.0275grams (Approximate)
- Mounting position : Any
- Lead free finish, RoHS compliant
- Max. mounting torque=0.5N.m(5.1Kgf.cm)

TO-220AB



TO-220AB		
DIM	MIN	MAX
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	--	6.35
G	12.70	14.73
H	2.29	2.79
I	0.51	1.14
J	0.30	0.64
K	3.53φ	4.09φ
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
O	1.14	1.70

All dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

Marking Code		STPR1650CT	STPR1660CT	
PARAMETER	SYMBOL	VALUE		UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	500	600	V
Maximum DC blocking voltage	V_{DC}	500	600	V
Maximum Average rectified output current @ $T_C = 120^\circ C$	$I_{(AV)}$	16		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I_{FSM}	90		A
Operating and Storage temperature range	T_J, T_{STG}	-55 to +150		°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Forward voltage (Note1)	$I_F=8A$	V_F	$T_J=25^\circ C$	1.50
			$T_J=125^\circ C$	1.40
	$I_F=16A$	V_F	$T_J=25^\circ C$	1.70
			$T_J=125^\circ C$	1.60
Maximum DC Reverse current at Rate DC Blocking Voltage	$T_J=25^\circ C$ $T_J=100^\circ C$	I_R	10 500	uA
Typical junction capacitance (Note2)		C_j	80	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance	R_{thJc}	3.0	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	MAX	UNIT
Reverse recovery time	$I_F=0.5A, I_{rr}=0.25A, I_R=1.0A$	T_{rr}	50	nS

Note :

- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC

RATING AND CHARACTERISTIC CURVES
STPR1650CT thru 1660CT



FIG.1- FORWARD CURRENT DERATING CURVE

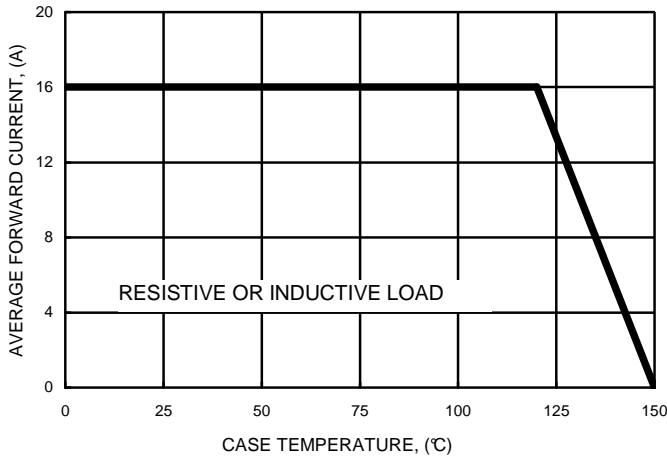


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

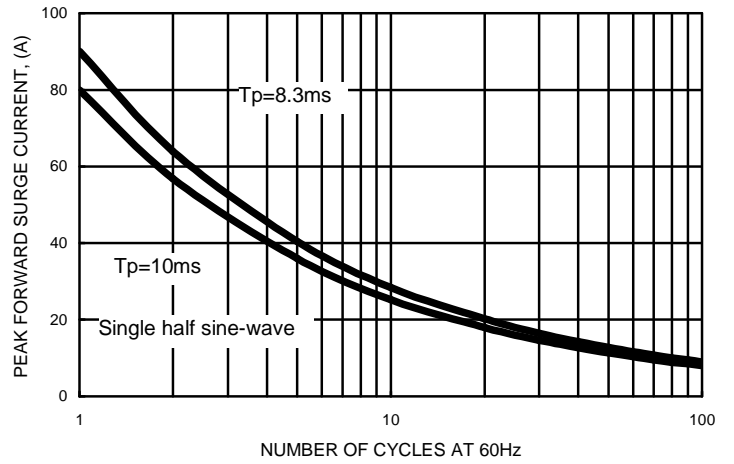


FIG.3- TYPICAL FORWARD CHARACTERISTICS

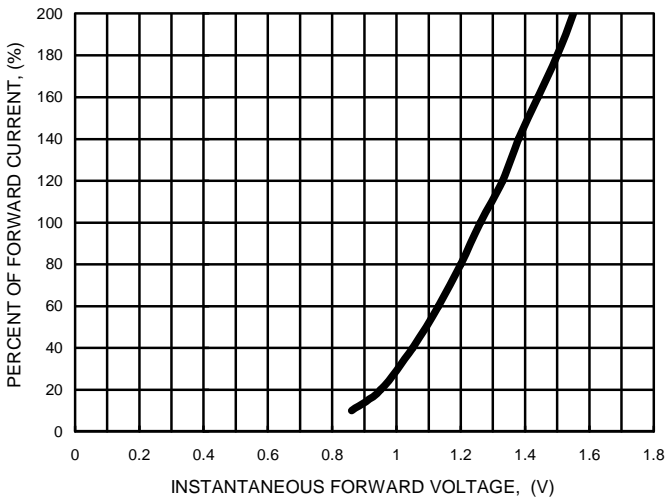


FIG.4- TYPICAL JUNCTION CAPACITANCE

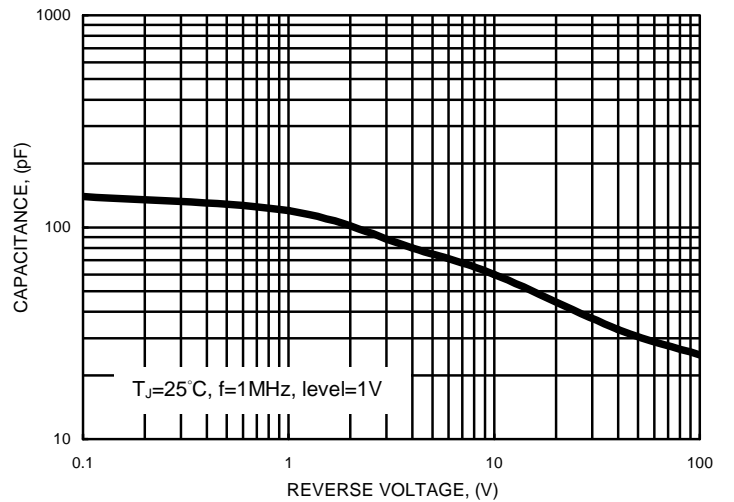
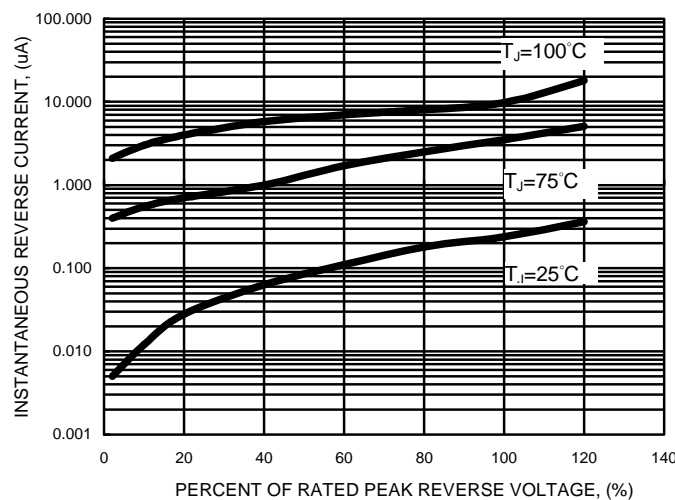


FIG.5- TYPICAL REVERSE CHARACTERISTICS



Important Notice and Disclaimer

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

LSC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does LSC assume any liability for application assistance or customer product design. LSC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.