LITE-ON SEMICONDUCTOR

STPR2050CT thru 2060CT

SUPER FAST
GLASS PASSIVATED RECTIFIERS

REVERSE VOLTAGE – 500 to 600 Volts
FORWARD CURRENT – 20 Amperes

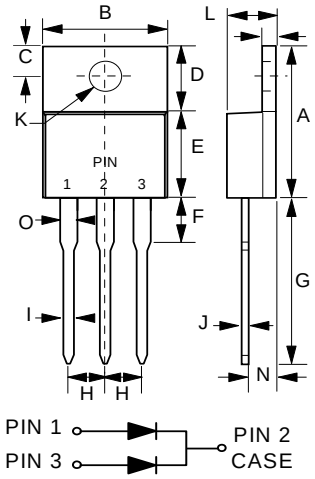
FEATURES

- 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
- Wight : 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℃ ambient temperature unless otherwis e specified.

ABSOLUTE RATINGS

Marking Code			STPR2050CT	STPR2060CT	
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 = 95°C	$I_{(AV)}$	20		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.		I_{FSM}	125		A
Operating and Storage temperature range		T_J ,T_{STG}	-55 to +150		℃

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	MAX	UNIT
Forward voltage (Note1)	I_F=10A	T_J =25℃ T_J =125℃	V_F	1.50 1.40	V
	I_F=20A	T_J =25℃ T_J =125℃		1.70 1.60	
Maximum DC Reverse current at Rate DC Blocking Voltage		T_J =25℃ T_J =100℃	I_R	10 500	uA
Typical junction capacitance (Note2)			C_j	100	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note3)	$RthJ_C$	1.5	℃/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	MAX	UNIT
Reverse recovery time	I_F=0.5A, I_{rr}=0.25A, I_R=1A	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
(3) Thermal Resistance Junction to Case

REV. 0, Jun.-2015, KTGC62

RATING AND CHARACTERISTIC CURVES
STPR2050CT thru 2060CT

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FIG.1- FORWARD CURRENT DERATING CURVE

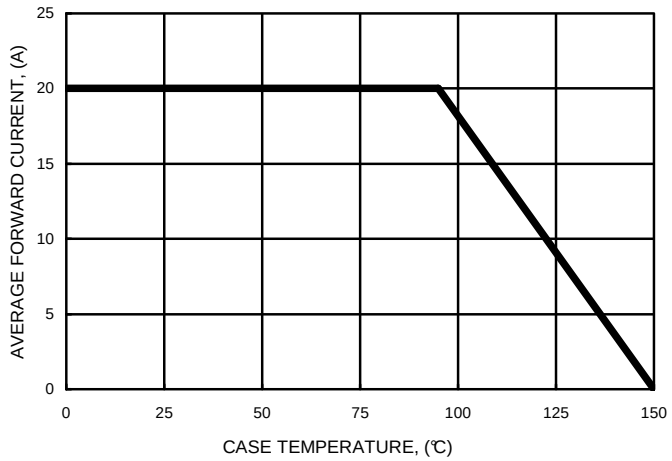


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

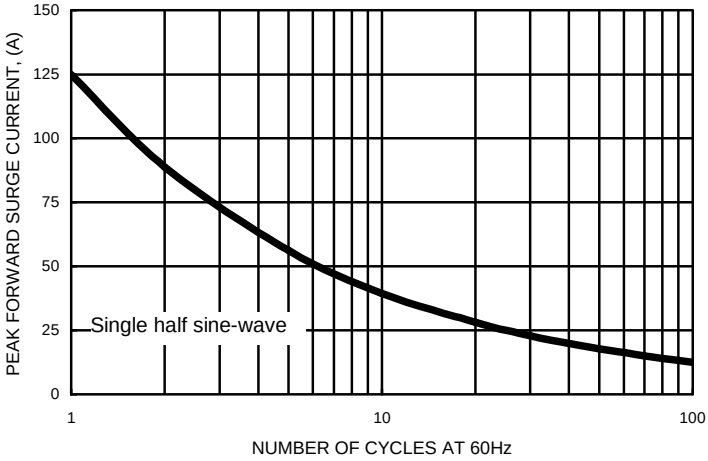


FIG.3- TYPICAL FORWARD CHARACTERISTICS

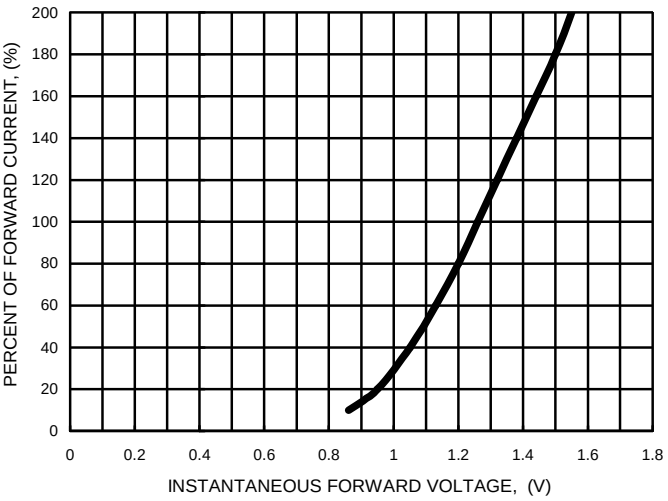


FIG.4- TYPICAL JUNCTION CAPACITANCE

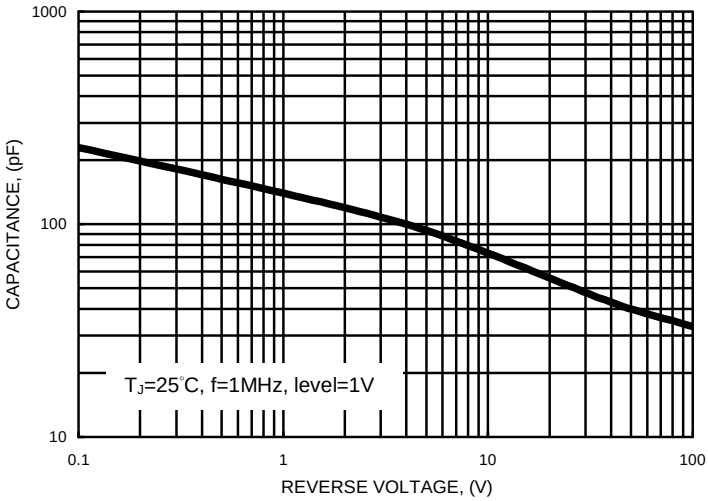
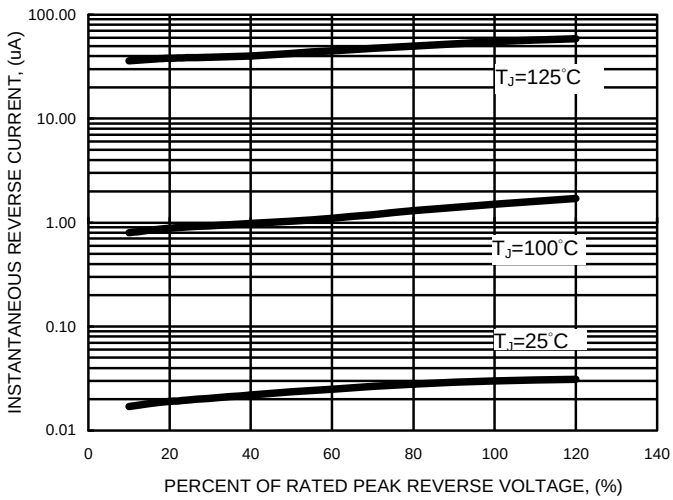


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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