LITE-ON SEMICONDUCTOR

STPR1010CT thru 1060CT

SUPER FAST
GLASS PASSIVATED RECTIFIERS

REVERSE VOLTAGE - **100** to **600** Volts
FORWARD CURRENT - **10** Amperes

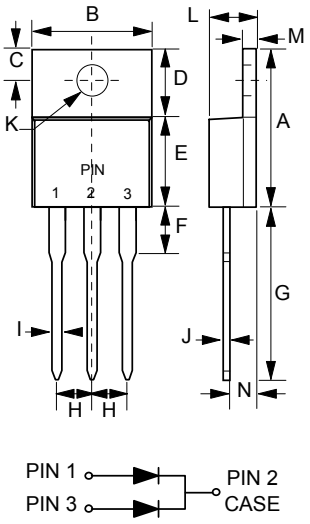
FEATURES

- Glass passivated chip
- Superfast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- High surge capacity
- Plastic package has UL flammability classification 94V-0

MECHANICAL DATA

- Case : TO-220AB molded plastic
- Polarity : As marked on the body
- Weight : 0.08 ounces, 2.24 grams
- Mounting position : Any
- Max. mounting torque = 0.5 N.m (5.1 Kgf.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	3.53 ⌀	4.09 ⌀
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	STPR 1010CT	STPR 1020CT	STPR 1030CT	STPR 1040CT	STPR 1050CT	STPR 1060CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	200	300	400	500	600	V
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	420	V
Maximum DC Blocking Voltage	V_{DC}	100	200	300	400	500	600	V
Maximum Average Forward Rectified Current @T_C=125℃	$I_{(AV)}$	10						A
Non Repetitive Peak Forward Surge Current Per Diode Sinusoidal T_P=8.3ms	I_{FSM}	55						A
Maximum forward Voltage Pulse Width =300us Duty cycle I_F=5A@T_J=25℃ I_F=5A@T_J=125℃ I_F=10A@T_J=25℃ I_F=10A@T_J=125℃	V_F	1.1 1.0 1.25 1.20		1.3 1.2 1.5 1.4		1.5 1.4 1.7 1.6		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T_J=25℃ @T_J=100℃	I_R	10 250						uA
Typical Junction Capacitance per element (Note 1)	C_J	80						pF
Maximum Reverse Recovery Time (Note 2)	T_{RR}	30		35		50		ns
Typical Thermal Resistance	$R_{\theta JC}$	4.0						℃/W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to +150						℃

NOTES : 1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2.Reverse Recovery Test Conditions:I_F=0.5A,I_R=1.0A,I_{RR} 0.25A.

REV. 2, Sep-2010, KTGC10

RATING AND CHARACTERISTIC CURVES
STPR1010CT thru STPR1060CT

FIG.1 - FORWARD CURRENT DERATING CURVE

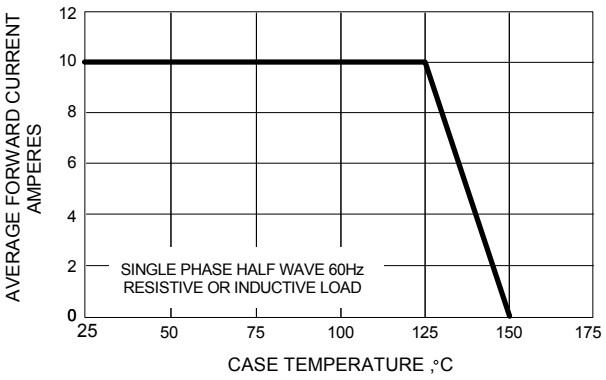


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

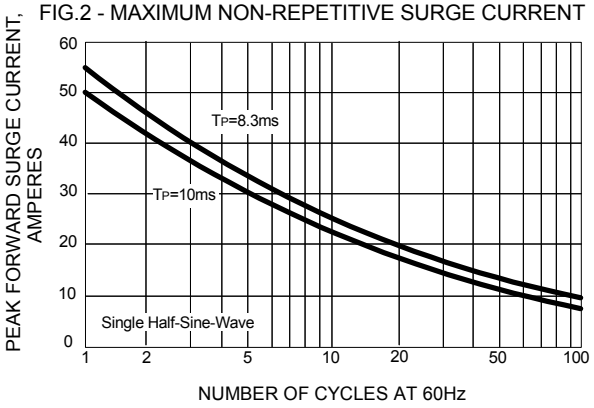


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

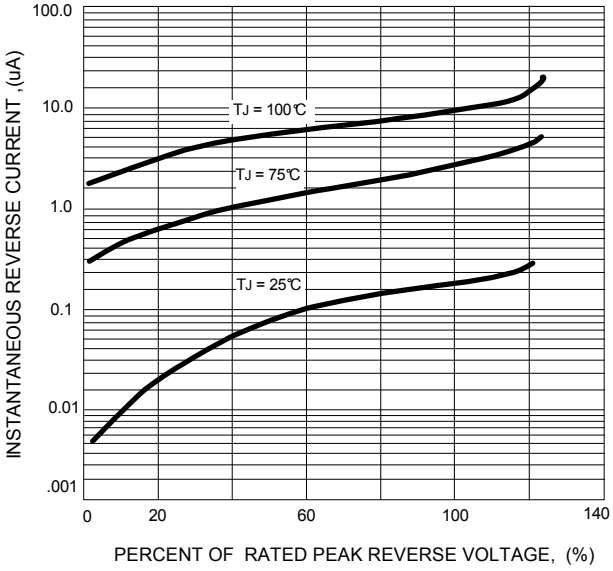


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

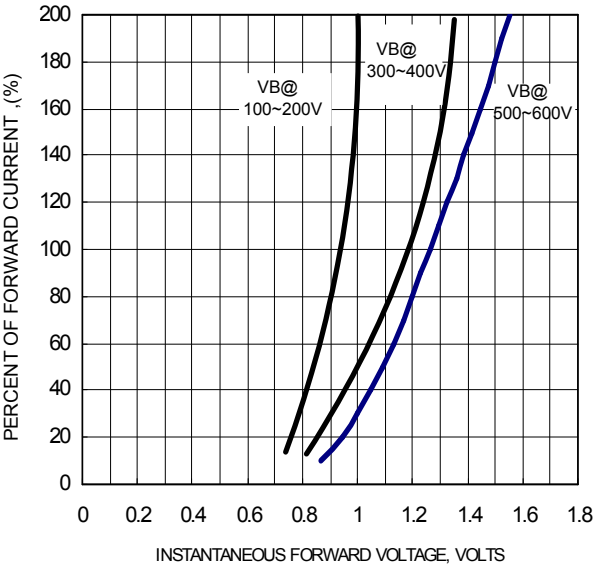


FIG.5 - TYPICAL JUNCTION CAPACITANCE

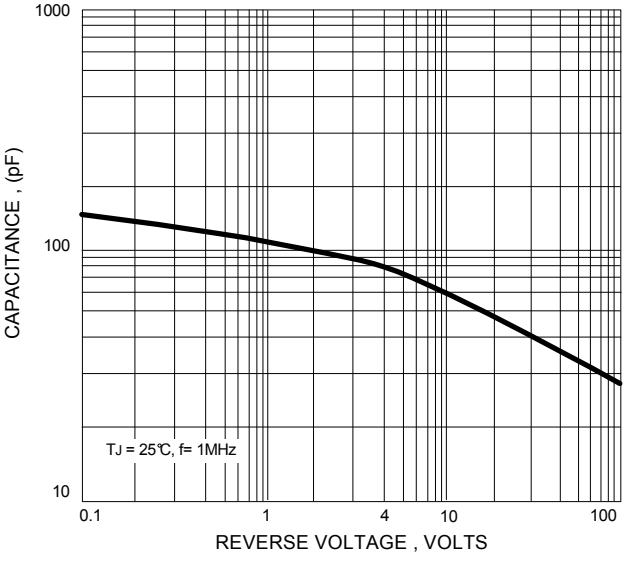
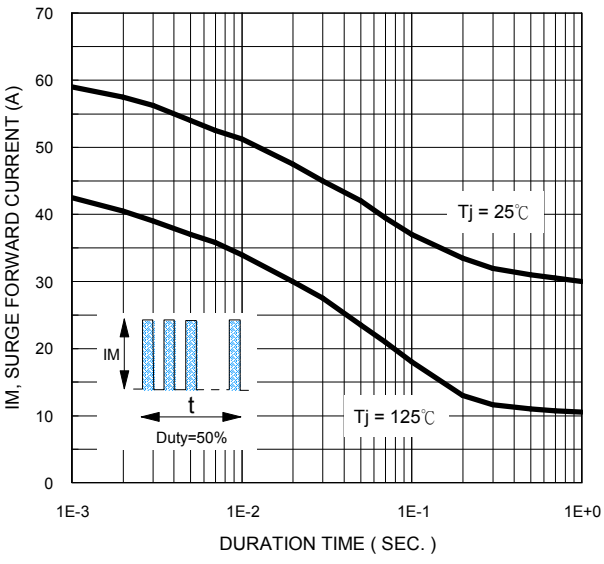


FIG.6 - MAXIMUM NON REPETITIVE SURGE PEAK FORWARD CURRENT VERSUS OVERLOAD DURATION PER DIODE



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