LITE-ON SEMICONDUCTOR

STPR1610CT thru 1660CT

SUPER FAST
GLASS PASSIVATED RECTIFIERS

REVERSE VOLTAGE **- 100** to **600** Volts
FORWARD CURRENT **- 16** Amperes

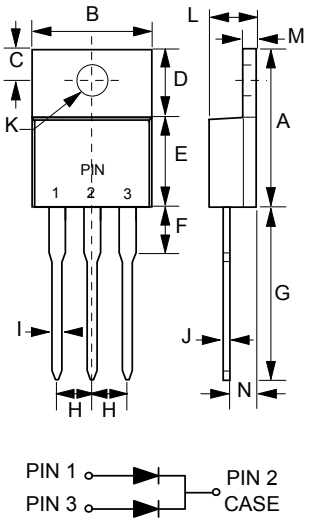
FEATURES

- 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 1610CT	STPR 1620CT	STPR 1630CT	STPR 1640CT	STPR 1650CT	STPR 1660CT	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=120℃	$I_{(AV)}$	16						A
Non Repetitive Peak Forward Surge Current Per Diode Sinusoidal T_P=8.3ms	I_{FSM}	90						A
Maximum forward Voltage Pulse Width =300us Duty cycle	V_F	I_F=8A @T_J=25℃: 1.1 I_F=8A @T_J=125℃: 1.0 I_F=16A @T_J=25℃: 1.25 I_F=16A @T_J=125℃: 1.20		I_F=8A @T_J=25℃: 1.3 I_F=8A @T_J=125℃: 1.2 I_F=16A @T_J=25℃: 1.5 I_F=16A @T_J=125℃: 1.4		I_F=8A @T_J=25℃: 1.5 I_F=8A @T_J=125℃: 1.4 I_F=16A @T_J=25℃: 1.7 I_F=16A @T_J=125℃: 1.6		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	@T_J=25℃: 10 @T_J=100℃: 500						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	$R_{\theta JC}$	3.0						℃/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, KTGC12

RATING AND CHARACTERISTIC CURVES
STPR1610CT thru STPR1660CT

FIG.1 - FORWARD CURRENT DERATING CURVE

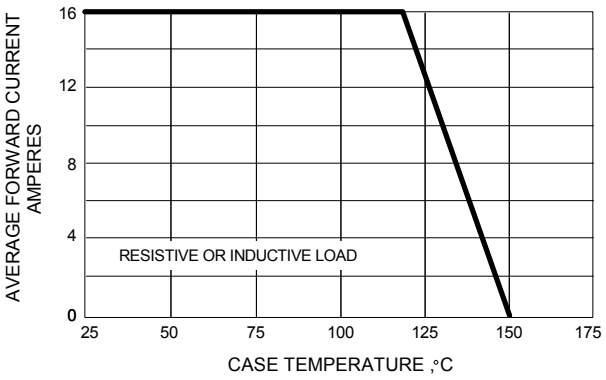


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

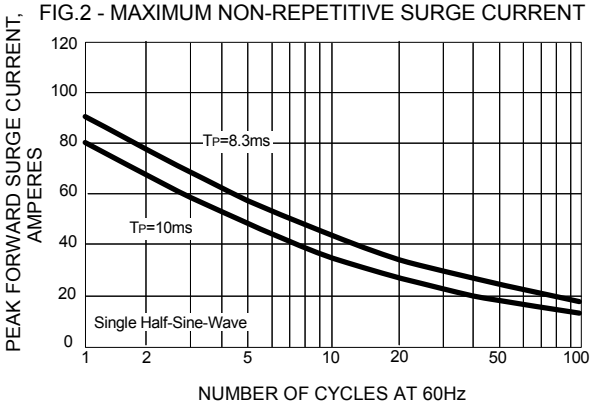


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

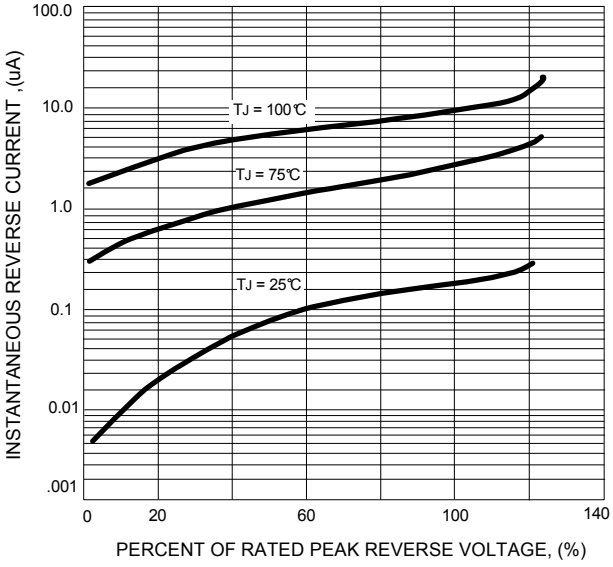


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

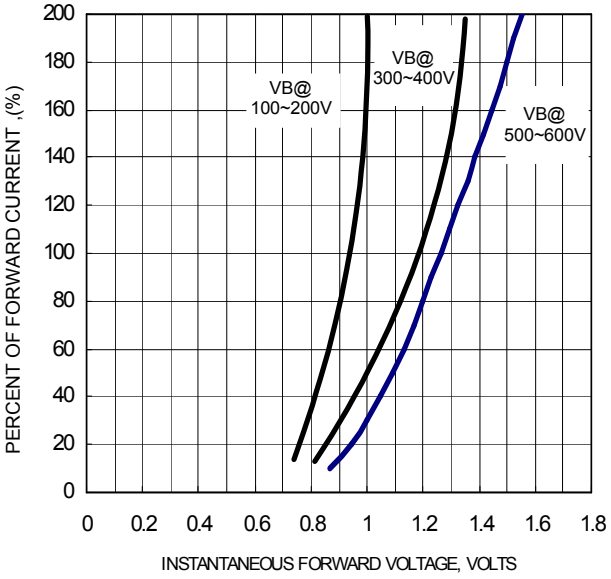
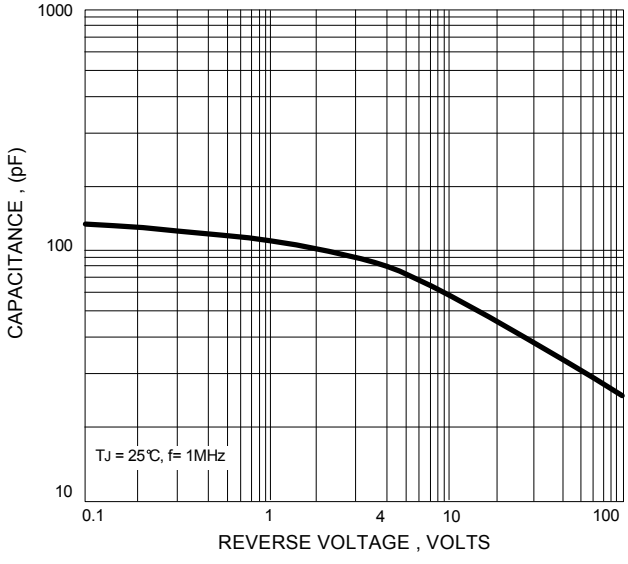


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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