

**SUPER FAST  
GLASS PASSIVATED RECTIFIERS**

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

**FEATURES**

- Glass passivated chip
- Super fast switching time for high efficiency
- Low forward drop voltage and high current capability
- Low reverse leakage current
- High surge capacity
- Qualification is according to AEC-Q101 Rev\_D

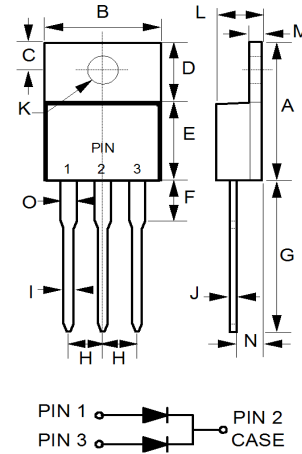
**APPLICATION**

- Switched mode Power supplies
- High frequency DC to DC converters

**MECHANICAL DATA**

- Case : TO-220AB molded plastic
- Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".
- Weight : 1.927grams(Approximate)
- Lead free finish , RoHS compliant
- Marking code:STPR1660CTW

**TO-220AB(WB)**



TO-220AB		
DIM	MIN	MAX
A	14.40	15.20
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	4.20
G	12.70	14.73
H	2.29	2.79
I	0.51	1.00
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	1.37

All Dimensions in millimeter

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ABSOLUTE RATINGS**

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	600	V
Maximum DC blocking voltage	V <sub>DC</sub>	600	V
Average rectified output current	I <sub>(AV)</sub>	16	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I <sub>FSM</sub>	100	A
Operating and Storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	TYP	MAX	UNIT
Forward voltage (Note1)	I <sub>F</sub> =8A T <sub>J</sub> =25°C T <sub>J</sub> =125°C	V <sub>F</sub>	-- 1.02	1.50 1.40	V
	I <sub>F</sub> =16A T <sub>J</sub> =25°C T <sub>J</sub> =125°C		-- 1.19	1.70 1.60	
Leakage current	V <sub>R</sub> =600V T <sub>J</sub> =25°C T <sub>J</sub> =100°C	I <sub>R</sub>	-- 2.34	10 500	uA
Typical junction capacitance (Note2)		C <sub>J</sub>		55	pF

**THERMAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note3,4)	R <sub>thJc</sub>	2	°C/W

**DYNAMIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Reverse recovery time	I <sub>F</sub> = 0.5A, I <sub>rr</sub> =0.25A, I <sub>R</sub> =1.0A	T <sub>RR</sub>	50	nS

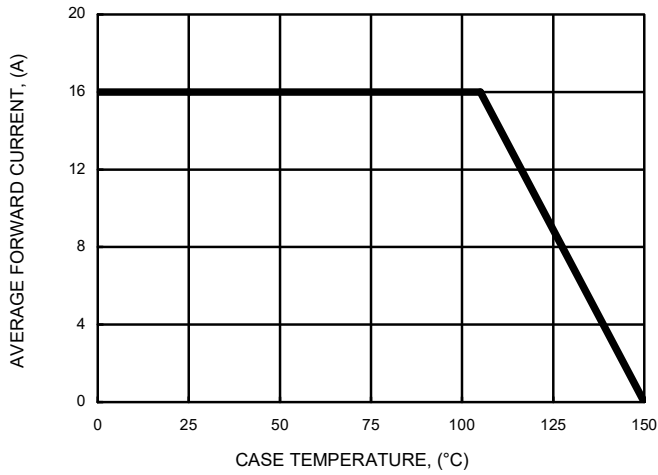
**Note :**

- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 V DC
- (3) The unit mounted on copper heatsink 100mm x 100mm x 2.04mm
- (4) Thermal Resistance test performed in accordance with JESD-51

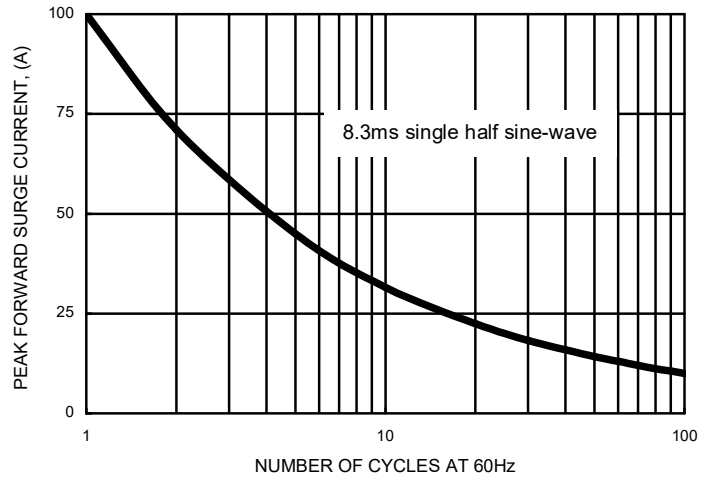
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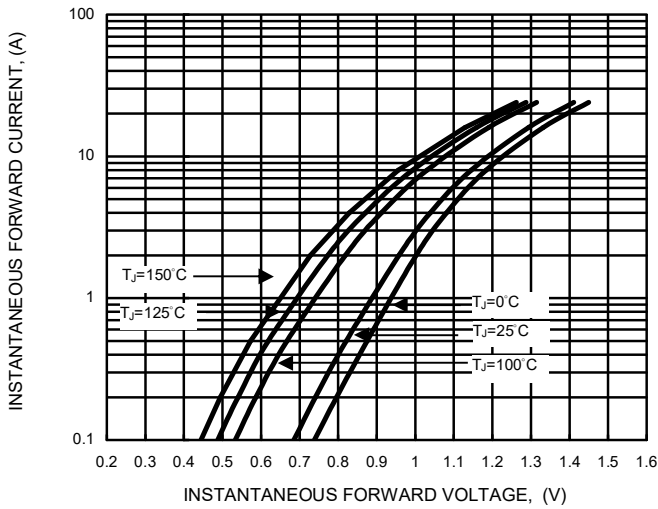
**FIG.1- FORWARD CURRENT DERATING CURVE**



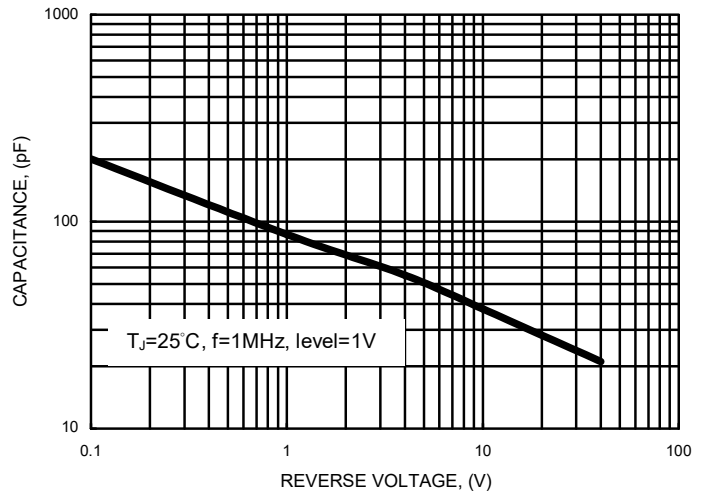
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



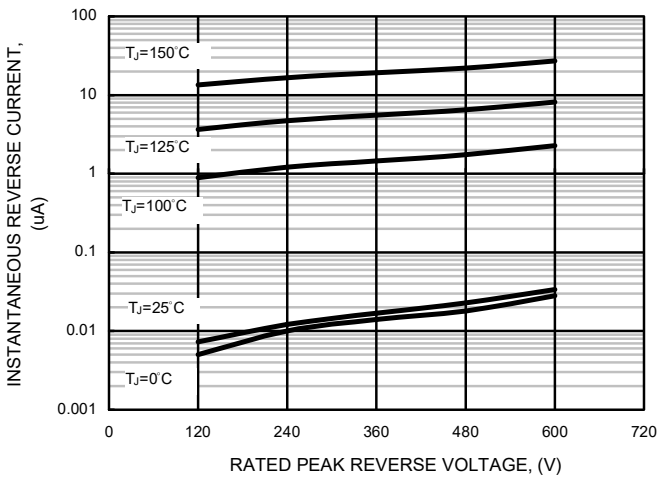
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



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