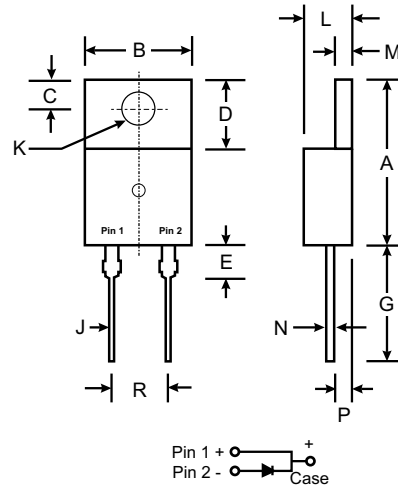


Features

- Glass Passivated Die Construction
- Diffused Junction
- Super-Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 150A Peak
- Low Reverse Leakage Current
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



TO-220AC		
Dim	Min	Max
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	—	6.35
G	12.70	14.73
J	0.51	1.14
K	3.53 \varnothing	4.09 \varnothing
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	2.03	2.92
R	4.83	5.33
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	STPR 1505D	STPR 1510D	STPR 1515D	STPR 1520D	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RWM} V_R	50	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	V
Average Rectified Output Current @ T _C = 115°C	I _O	15				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	150				A
Forward Voltage @ I _F = 15A @ T _J = 25°C @ T _J = 125°C	V _{FM}	1.25 1.20				V
Peak Reverse Current at Rated DC Blocking Voltage @ T _C = 25°C @ T _C = 100°C	I _{RM}	50 1000				μA
Reverse Recovery Time (Note 2)	t _{rr}	30				ns
Typical Junction Capacitance (Note 3)	C _j	160				pF
Typical Thermal Resistance Junction to Case (Note 1)	R _{θJC}	2.3				°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150				°C

- Notes:
1. Case mounted on heatsink.
 2. Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A.
 3. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.

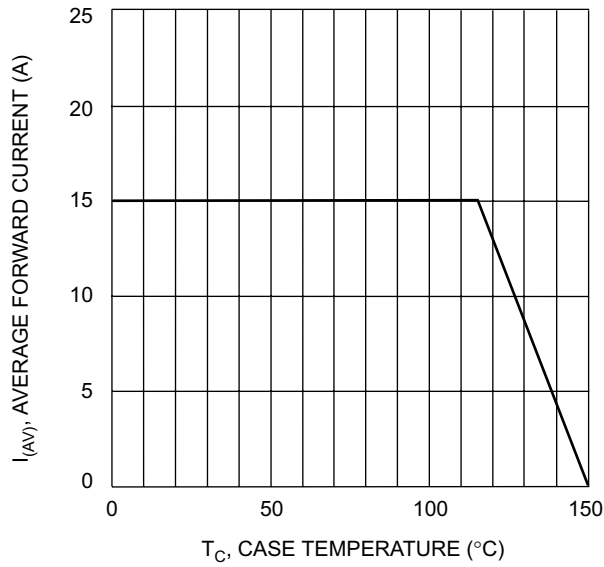


Fig. 1 Forward Current Derating Curve

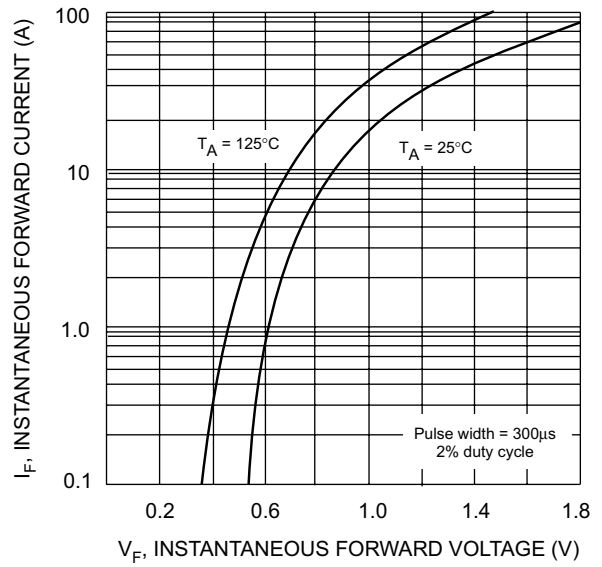


Fig. 2 Typical Forward Characteristics

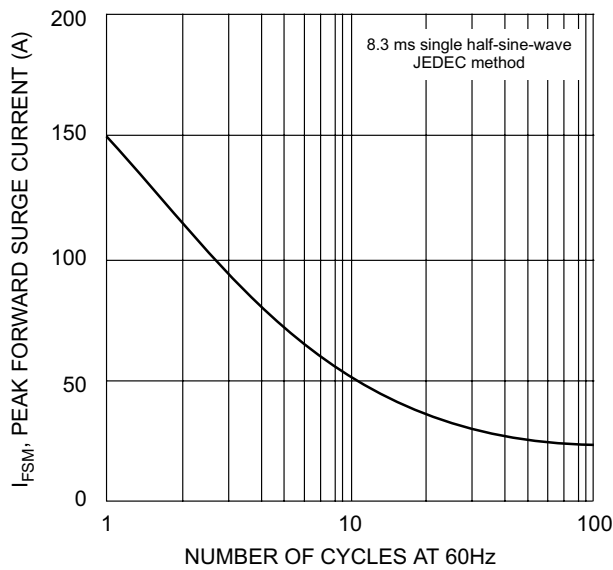


Fig. 3 Max Non-Repetitive Surge Current

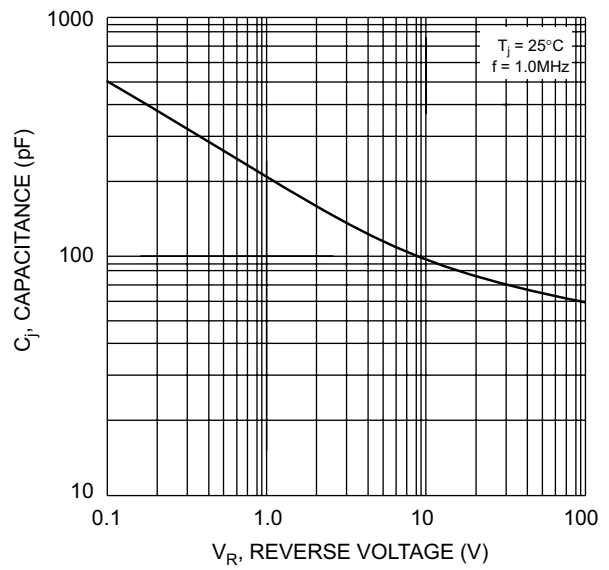


Fig. 4 Typical Junction Capacitance

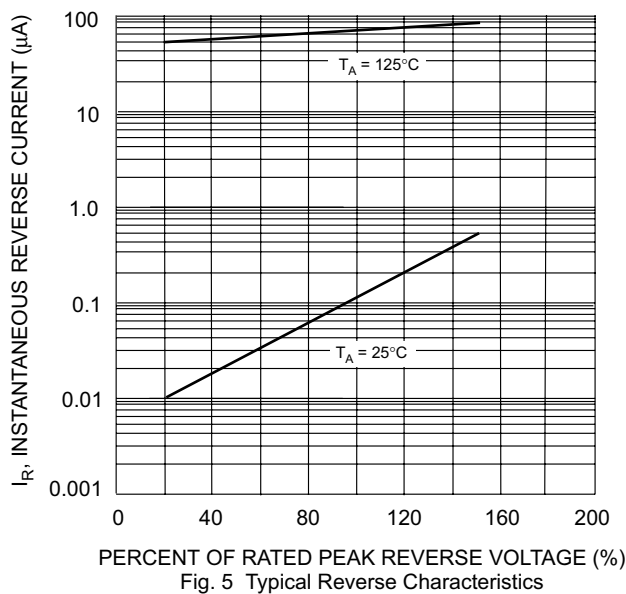


Fig. 5 Typical Reverse Characteristics