

Ultra Fast Recovery High Efficiency Rectifier Diodes

V_{RRM} - 50 Volts to 1000 Volts, 2A

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Features

- Glass Passivated (GPP)
- Low cost
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0
- Lead free
- Case style: DO-204-AC (DO-15) molded plastic

Maximum Ratings and Electrical Characteristics

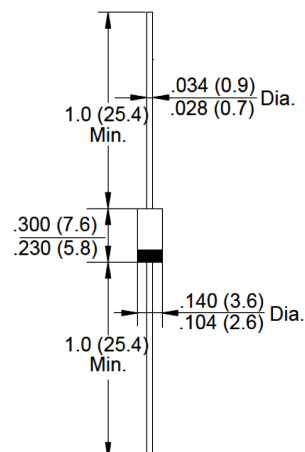
Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

**RoHS
Compliant**

DO-204-AC (DO-15)



Dimensions : Inches (Millimetres)

Characteristics	Symbol	MP000939	MP000940	MP000941	MP000942	MP000943	MP000944	MP000945	MP000946	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	420	560	700	
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	1000	
Maximum Average Forward Rectified Current @ T _A = 50°C	I _(AV)	2								A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	60								A
Peak Forward Voltage at 2A DC	V _F	1			1.3		1.7			V
Maximum DC Reverse Current at Rated @ T _J = 25°C DC Blocking Voltage @ T _J = 100°C	I _R	5 100								μA
Maximum Reverse Recovery Time (Note 1)	T _{RR}	50					75			nS
Typical Junction Capacitance (Note2)	C _J	50					30			pF

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Characteristics	Symbol	MP000939	MP000940	MP000941	MP000942	MP000943	MP000944	MP000945	MP000946	Unit
Typical Thermal Resistance Junction to Ambient	R _{θJA}	25								°C/W
Operating Junction Temperature Range	T _J	-55 to +150								°C
Storage Temperature Range	T _{STG}	-55 to +150								°C

Notes:

1. Measured with I_F = 0.5A, I_R = 1A, I_{RR} = 0.25A
2. Measured at 1MHz and applied reverse voltage of 4V DC.
3. The typical data above is for reference only.

Rating and Characteristic Curves

Fig. 1 - Forward Current Derating Curve

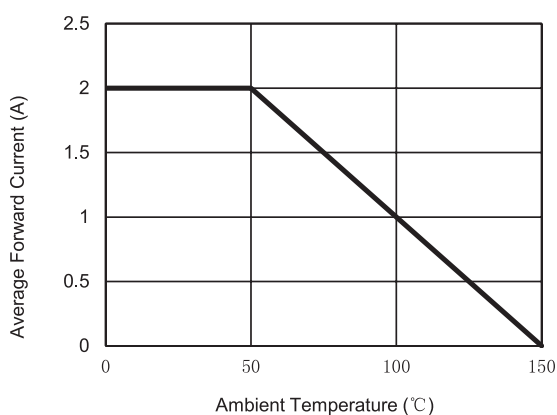


Fig. 3 - Typical Junction Capacitance

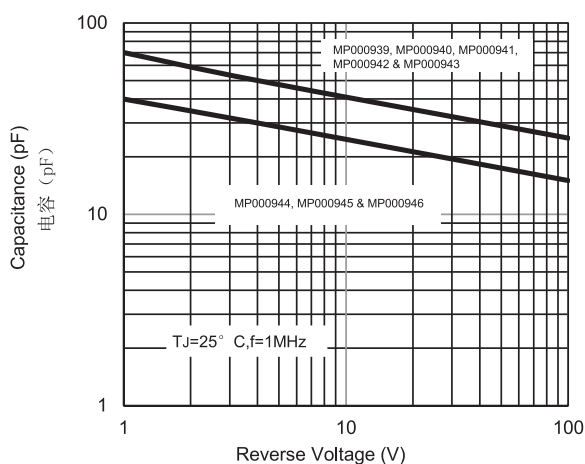


Fig. 2 - Maximum Non-Repetitive Surge Current

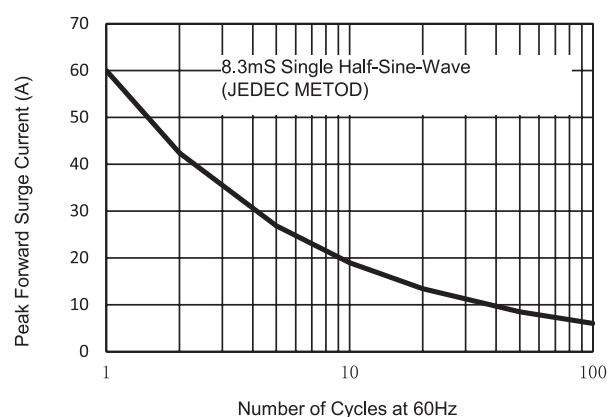
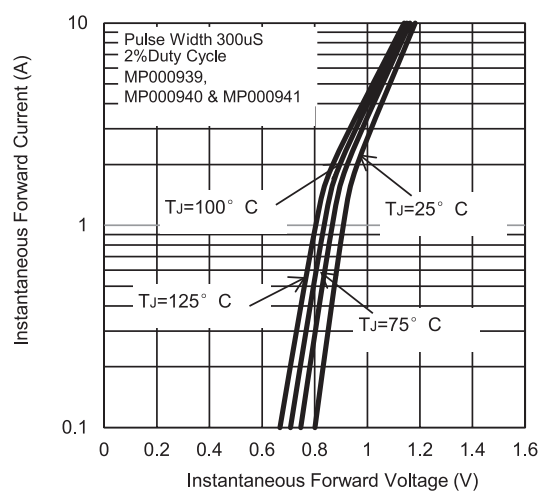


Fig. 4 - Typical Forward Characteristics



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Fig. 5 - Typical Forward Characteristics

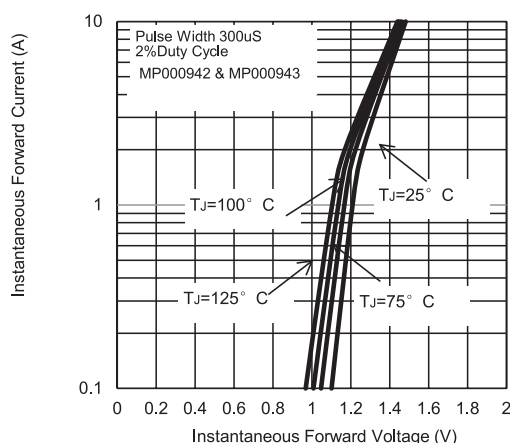
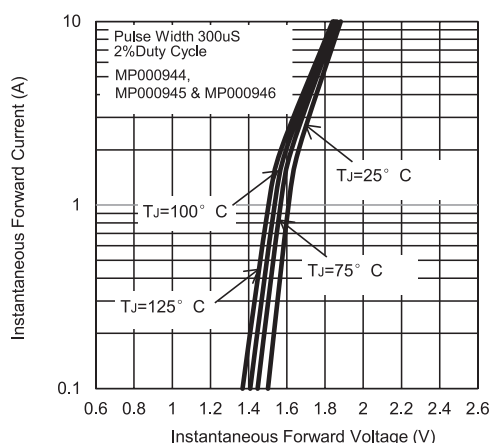


Fig. 6 - Typical Forward Characteristics



Part Number Table

Description	Part Number
Rectifier Diode, Ultra Fast, 50V, 2A, DO-204AC (DO-15)	MP000939
Rectifier Diode, Ultra Fast, 100V, 2A, DO-204AC (DO-15)	MP000940
Rectifier Diode, Ultra Fast, 200V, 2A, DO-204AC (DO-15)	MP000941
Rectifier Diode, Ultra Fast, 300V, 2A, DO-204AC (DO-15)	MP000942
Rectifier Diode, Ultra Fast, 400V, 2A, DO-204AC (DO-15)	MP000943
Rectifier Diode, Ultra Fast, 600V, 2A, DO-204AC (DO-15)	MP000944
Rectifier Diode, Ultra Fast, 800V, 2A, DO-204AC (DO-15)	MP000945
Rectifier Diode, Ultra Fast, 1kV, 2A, DO-204AC (DO-15)	MP000946

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