

RMPG06A, RMPG06B, RMPG06D, RMPG06G, RMPG06J, RMPG06K

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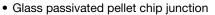
Vishay General Semiconductor

Miniature Fast Switching Plastic Rectifier



PRIMARY CHARACTERISTICS						
I _{F(AV)}	1.0 A					
V_{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V					
I _{FSM}	40 A					
t _{rr}	150 ns, 200 ns, 250 ns					
V_{F}	1.3 V					
I _R	5.0 μA					
T_J max.	150 °C					
Package	MPG06					
Diode variation	Single die					

FEATURES





- · Fast switching for high efficiency
- Low leakage current, typical I_R less than 0.1 μA
- High forward surge capability

COMPLIANT Solder dip 275 °C max. 10 s, per JESD 22-B106

RoHS

- AEC-Q101 qualified
- · Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

TYPICAL APPLICATIONS

For use in fast switching rectification of power supply, inverters, converters, and freewheeling diodes for consumer, automotive, and telecommunication.

MECHANICAL DATA

Case: MPG06, molded epoxy over passivated chip Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS-compliant, commercial grade Base P/NHE3_X - RoHS-compliant and AEC-Q101 qualified ("_X" denotes revision code e.g. A, B,)

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test, HE3 suffix meets JESD 201 class 2 whisker test

Polarity: Color band denotes cathode end

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL	RMPG06A	RMPG06B	RMPG06D	RMPG06G	RMPG06J	RMPG06K	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	٧
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at T _A = 25 °C	I _{F(AV)}	1.0						А
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	40						Α
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150					°C	



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST (CONDITIONS	SYMBOL	RMPG06A	RMPG06B	RMPG06D	RMPG06G	RMPG06J	RMPG06K	UNIT
Maximum instantaneous forward voltage	1.0 A		V _F	1.3				V		
Maximum DC reverse current at rated DC		T _A = 25 °C	- I _R	5.0				μA		
blocking voltage		T _A = 125 °C		50						
Typical reverse recovery time	$I_F = 0.5$ $I_{rr} = 0.2$	5 A, I _R = 1.0 A, 25 A	t _{rr}	150 200 250				250	ns	
Typical junction capacitance	4.0 V, ⁻	1 MHz	СЛ	6.6				pF		

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER	ER SYMBOL RMPG06A RMPG06B RMPG06G RMPG06J RMPG06F					RMPG06K	UNIT	
Typical thermal resistance	R _{0JA} (1)	67					°C/W	
Typical thermal resistance	R _{0JL} (1)	30						C/VV

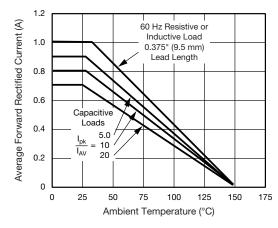
Note

⁽¹⁾ Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length, PCB mounted with 0.22" x 0.22" (5.5 mm x 5.5 mm) copper pads

ORDERING INFORMATION (Example)									
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE					
RMPG06J-E3/54	0.202	54	5500	13" diameter paper tape and reel					
RMPG06J-E3/73	0.202	73	3000	Ammo pack packaging					
RMPG06JHE3_A/54 (1)	0.202	54	5500	13" diameter paper tape and reel					
RMPG06JHE3_A/73 (1)	0.202	73	3000	Ammo pack packaging					

Note

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)





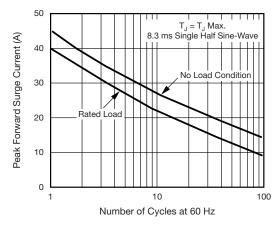


Fig. 2 - Maximum Peak Forward Surge Current

⁽¹⁾ AEC-Q101 qualified

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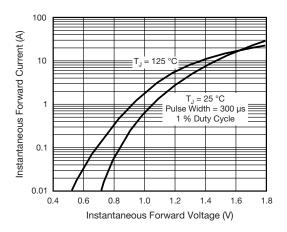


Fig. 3 - Typical Instantaneous Forward Characteristics

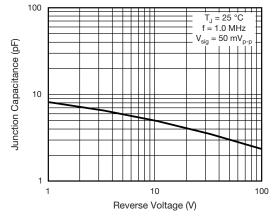


Fig. 5 - Typical Junction Capacitance

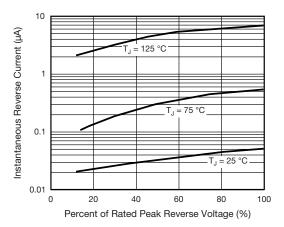


Fig. 4 - Typical Reverse Characteristics

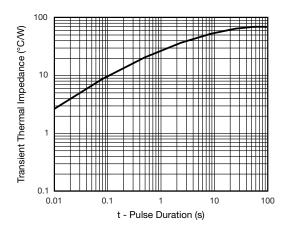
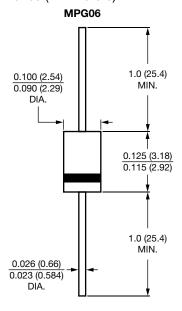


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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