



NEC

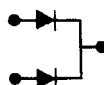
NEW ENGLAND SEMICONDUCTOR

NSG2599
NSG2600
NSG2601
NSG2602

POWER RECTIFIERS

- Ultra-Fast Rectifiers
- Low Forward Voltage
- Matched Dual Die Construction
- Center Tap
- 150°C Operating Temperature

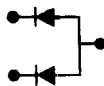
Common Cathode



NSG2600 / NSG2601

ULTRA FAST
RECTIFIERS
8 AMPERES

Common Anode



NSG2599 / NSG2602

TO-257AA



MAXIMUM RATINGS (PER LEG)

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage			Volts
NSG2599 - 2600	V_{RRM}	200	
NSG2601 - 2602	V_{RRM}	600	
Average Rectified Forward Current (Rated V_R) $T_C = 150^\circ\text{C}$	$I_{F(AV)}$	8	Amps
Peak Repetitive Forward Current, Per Leg (Rated V_R , Square Wave, 20 kHz) $T_C = 150^\circ\text{C}$	I_{FRM}	16	Amps
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions, halfwave, single phase, 60 Hz)	I_{FSM}	100	Amps
Operating Junction Temperature	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Thermal Resistance -- Junction to Case	$R_{\theta JC}$	2.1	$^\circ\text{C/W}$
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ELECTRICAL CHARACTERISTICS

Maximum Instantaneous Forward Voltage (1) ($I_F = 8$ Amps, $T_J = 25^\circ\text{C}$)	V_F		Volts
NSG2599 - NSG2600		1.2	
NSG2601		1.55	
NSG2602		1.64	
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, $T_J = 25^\circ\text{C}$)	I_R	10	μA
NSG2599 - 2600		0.5	mA
(Rated dc Voltage, $T_J = 125^\circ\text{C}$)		20	μA
(Rated dc Voltage, $T_J = 25^\circ\text{C}$)	I_R	1.0	mA
(Rated dc Voltage, $T_J = 125^\circ\text{C}$)			
Reverse Recovery Time/Diode ($I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$)	t_{rr}	35	ns
NSG2599 - 2600		50	ns
($I_{REC} = 0.25\text{A}$)			
NSG2601 - 2602			
($T_A = 25^\circ\text{C}$)			

(1) Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$

NEW ENGLAND SEMICONDUCTOR

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T4-4.8-860-1204 REV: --