



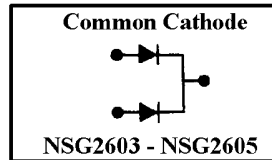
# NEG

NEW ENGLAND SEMICONDUCTOR

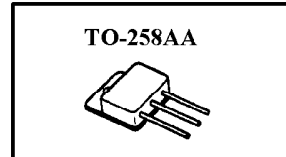
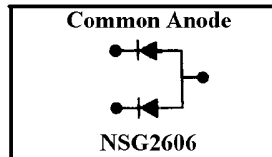
NSG2603  
NSG2604  
NSG2605  
NSG2606

## POWER RECTIFIERS

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



ULTRA FAST  
RECTIFIERS  
15 AMPERES



### MAXIMUM RATINGS (PER LEG)

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage			Volts
NSG2603	$V_{RRM}$	100	
NSG2604	$V_{RRM}$	300	
NSG2605 - NSG2606	$V_{RRM}$	600	
Average Rectified Forward Current (Rated $V_R$ ) $T_C = 150^\circ C$	$I_{F(AV)}$	15	Amps
Peak Repetitive Forward Current, Per Leg (Rated $V_R$ , Square Wave, 20 kHz) $T_C = 150^\circ C$	$I_{FRM}$	30	Amps
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions, halfwave, single phase, 60 Hz)	$I_{FSM}$	150	Amps
Operating Junction Temperature	$T_J$	-55 to +150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

### THERMAL CHARACTERISTICS

Thermal Resistance -- Junction to Case	$R_{\theta JC}$	1.6	$^\circ C/W$
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### ELECTRICAL CHARACTERISTICS

Maximum Instantaneous Forward Voltage (1) ( $I_F = 15$ Amps, $T_J = 25^\circ C$ )	$V_F$		Volts
NSG2603		1.1	
NSG2604		1.35	
NSG2605		1.6	
NSG2606		1.71	
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, $T_J = 25^\circ C$ )	$I_R$	20	$\mu A$
NSG2603 - 2604		1.0	mA
(Rated dc Voltage, $T_J = 125^\circ C$ )		20	$\mu A$
NSG2605 - 2606		2.0	mA
(Rated dc Voltage, $T_J = 125^\circ C$ )			
Reverse Recovery Time/Diode ( $I_F = 0.5A$ , $I_R = 1.0A$ )	$t_{rr}$	35	ns
NSG2603		50	ns
( $I_{REC} = 0.25A$ )			
NSG2604 - 2606			
( $T_A = 25^\circ C$ )			

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

NEW ENGLAND SEMICONDUCTOR

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T4-4.8-860-1205 REV: --