



NES

NEW ENGLAND SEMICONDUCTOR

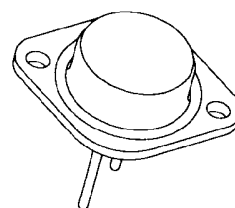
NES2601
NES2601HR2
NES2602
NES2602HR2
NES2603
NES2603HR2
NES2603-225

POWER RECTIFIERS

High Efficiency, 30 Ampere Center-Tap

- VERY LOW FORWARD VOLTAGE
- VERY FAST SWITCHING SPEED
- CONVENIENT PACKAGE
- HIGH SURGE
- LOW THERMAL RESISTANCE
- MECHANICALLY RUGGED
- BOTH POLARITIES AVAILABLE

TO-3



MAXIMUM RATINGS (PER LEG)

Rating	Symbol	Value	Unit
Peak Inverse Voltage			
NES2601, NES2601HR2	V_R	50	Volts
NES2602, NES2602HR2	V_R	100	
NES2603, NES2603HR2	V_R	150	
NES2603-225	V_R	225	
Maximum Average DC Output Current $T_C = 100^\circ\text{C}$	$I_{F(AV)}$	30	Amps
Non-repetitive Sinusoidal Surge Current 8.3ms	I_{FSM}	400	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	$R_{\theta JC}$	1.0	$^\circ\text{C/W}$
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ELECTRICAL CHARACTERISTICS

Maximum Forward Voltage $T_P = 300 \mu\text{S}$			
.930 V @ 15 Amps, $T_C = 25^\circ\text{C}$	V_F	50	Volts
.825 V @ 15 Amps, $T_C = 125^\circ\text{C}$		100	
.930 V @ 15 Amps, $T_C = 25^\circ\text{C}$		150	
.825 V @ 15 Amps, $T_C = 125^\circ\text{C}$		225	
.930 V @ 15 Amps, $T_C = 25^\circ\text{C}$			
.825 V @ 15 Amps, $T_C = 125^\circ\text{C}$			
Maximum Instantaneous Reverse Current			
Rated dc Voltage, $T_C = 25^\circ\text{C}$	I_R	20	μA
Rated dc Voltage, $T_C = 125^\circ\text{C}$		4.0	mA
Reverse Recovery Time/Diode			
$I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{REC} = 0.25 \text{ A}$	t_{rr}	35	ns

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6 Lake Street Lawrence, MA 01841
1-800-446-1158 / (978) 794-1666 / FAX: (978) 689-0803

T4-4.8-860-1201 REV: --

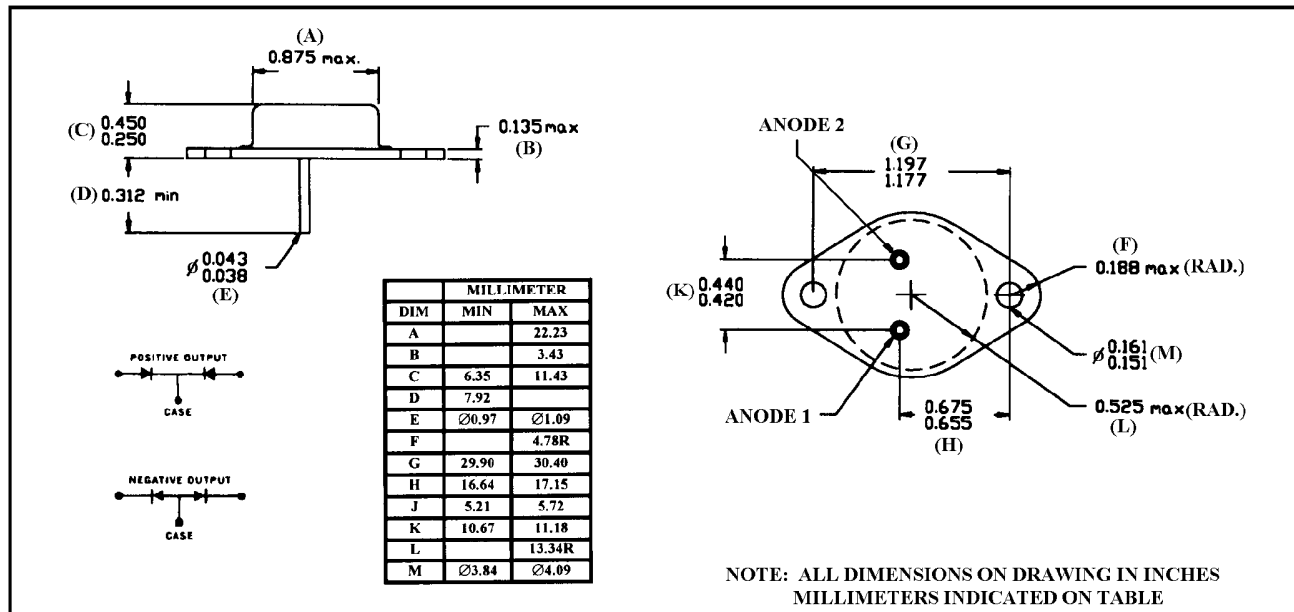


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NES2601HR2
NES2602
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NES2603
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NES2603-225

MECHANICAL OUTLINE



SX LEVEL RELIABILITY TESTING

100% SCREENING	GROUP A	GROUP B (Sample)	GROUP C (Sample)
Internal Visual Temp Cycle Thermal Response Constant Acceleration PIND Fine and Gross Leak HTRB Power Burn In	Visual and Mechanical DC Static Tests 25°C DC Static Tests High Temp DC Static Tests Low Temp Dynamic Tests @ 25°C	Solderability Temp Cycle Fine and Gross Leak Bond Strength Intermittent Op Life Steady State Op life Thermal Resistance Hi-Temp (non operating)	Physical Dimensions Thermal Shock Terminal Strength Hermetic Seal Moisture Resistance Shock Test Vibration Test Constant Acceleration Salt Atmosphere Operation Life

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