



ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748-5089
<http://www.nteinc.com>

NTE6354 thru NTE6365 Silicon Power Rectifier Diode 300 Amp, DO9

Features:

- Diffused Diode
- High Voltage Ratings up to 1600 Volts
- High Surge Current Capabilities
- Available in Cathode-to-Case (Standard) or Anode-to-Case (Reverse Polarity) Style

Ratings and Characteristics:

Average Forward Current ($T_C = +130^\circ\text{C Max}$), $I_{F(AV)}$ 300A

Maximum Repetitive Peak Reverse Voltage, V_{RRM}

NTE6354, NTE6355*	400V
NTE6356, NTE6357*	600V
NTE6358, NTE6359*	1000V
NTE6362, NTE6363*	1400V
NTE6364, NTE6365*	1600V

Maximum Non-Repetitive Peak Reverse Voltage, V_{RSM}

NTE6354, NTE6355*	500V
NTE6356, NTE6357*	720V
NTE6358, NTE6359*	1200V
NTE6362, NTE6363*	1500V
NTE6364, NTE6365*	1700V

Maximum Repetitive Peak Reverse Current ($T_J = +200^\circ\text{C}$), I_{RRM}

NTE6354, NTE6355*	40mA
NTE6356, NTE6357*	40mA
NTE6358, NTE6359*	30mA
NTE6362, NTE6363*	30mA
NTE6364, NTE6365*	30mA

Maximum Forward Surge Current, I_{FSM}

50Hz	5000A
60Hz	5200A

Fusing Current, I^2t

50Hz	214000A ² s
60Hz	195000A ² s

Operating Junction Temperature, T_J -40° to $+180^\circ\text{C}$

* Indicated Anode-to-Case polarity, Cathode-to-Case polarity is standard.

Rev. 6-19

Electrical Specifications:

Parameter	Symbol	Test Conditions			Rating	Unit	
Maximum Average Forward Current	I _{F(AV)}	180° sinusoidal condition, T _C = +130°C Max			300	A	
Maximum Peak One–Cycle Non–Repetitive Surge Current	I _{FSM}	t = 10ms	No voltage reapplied	Sinusoidal half wave, Initial T _J = T _J max	5000	A	
		t = 8.3ms			5200	A	
		t = 10ms	100% V _{RRM} reapplied		3800	A	
		t = 8.3ms			4000	A	
Maximum I ² t for Fusing	I ² t	t = 10ms	No voltage reapplied		214000	A ² s	
		t = 8.3ms			195000	A ² s	
Maximum I ² t for Individual Device Fusing		t = 10ms	100% V _{RRM} reapplied		151000	A ² s	
		t = 8.3ms			138000	A ² s	
Maximum I ² √t		I ² √t	t = 0.1 to 10ms, no voltage reapplied			2140000	A ² √t
Maximum Value of Threshold Voltage		V _{M (TO)}	T _J = +200°C			0.610	V
Maximum Value of Forward Slope Resistance		r _t	T _J = +200°C			0.751	mΩ

Thermal-Mechanical Specifications:

Parameter	Symbol	Test Conditions	Rating	Unit
Maximum Operation Junction Temperature	T_J		-40 to + 180	$^{\circ}\text{C}$
Maximum Storage Temperature	T_{stg}		-55 to + 180	$^{\circ}\text{C}$
Maximum Internal Thermal Resistance Junction-to-Case	R_{thJC}	DC operation	0.18	K/W
Thermal Resistance, Case-to-Sink	R_{thCS}	Mounting surface flat, smooth and greased	0.08	K/W
Mounting Torque	T	Non-lubricated threads	40.06 (360)	$\text{m}\cdot\text{N}$ ($\text{in}\cdot\text{lb}$)

