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## NTE640, NTE641, NTE642 2A Schottky Barrier Rectifier Fast Switching, Surface Mount DO214AA Type Package

**Features:**

- Low Forward Voltage
- Guard Ring for Transient and ESD Protection
- Surge Overload Rating to 50A Peak
- Low Power Loss
- Fast Switching

**Applications:**

- High Frequency SMPS
- Inverters
- Free Wheeling Diodes

**Maximum Ratings:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Peak Repetitive Reverse Voltage, $V_{RRM}$	
NTE640 .....	40V
NTE641 .....	60V
NTE642 .....	100V
Working Peak Reverse Voltage, $V_{RWM}$	
NTE640 .....	40V
NTE641 .....	60V
NTE642 .....	100V
DC Blocking Voltage, $V_R$	
NTE640 .....	40V
NTE641 .....	60V
NTE642 .....	100V
RMS Reverse Voltage, $V_{R(RMS)}$	
NTE640 .....	28V
NTE641 .....	42V
NTE642 .....	70V
Average Rectified Output Current (Note 1), $I_O$ .....	2A
Non-Repertitive Peak Forward Surge Current, $I_{FSM}$ (8.3ms Single Half Sine-Wave Superimposed on Rated Load) .....	50A

Note 1. Mounted on FR-4 PCB with 8.0 x 8.0mm copper pads.

**Maximum Ratings (Cont'd):** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Forward Voltage ( $I_F = 2\text{A}$ ),  $V_{FM}$

NTE640 .....	0.50V
NTE641 .....	0.70V
NTE642 .....	0.85V

Peak Reverse Current at Rated DC Blocking Voltage,  $I_{RM}$

$T_J = +25^\circ\text{C}$ .....	0.5mA
$T_J = +100^\circ\text{C}$ .....	10mA

Typical Junction Capacitance (Note 2),  $C_J$

NTE640, NTE641 .....	150pF
NTE642 .....	100pF

Operating Junction Temperature Range,  $T_J$

NTE640 .....	$-55^\circ$ to $+125^\circ\text{C}$
NTE641, NTE642 .....	$-55^\circ$ to $+150^\circ\text{C}$

Storage Temperature Range,  $T_{stg}$  .....

$-55^\circ$  to  $+150^\circ\text{C}$

Thermal Resistance, Junction-to-Ambient (Note 1),  $R_{thJA}$  .....

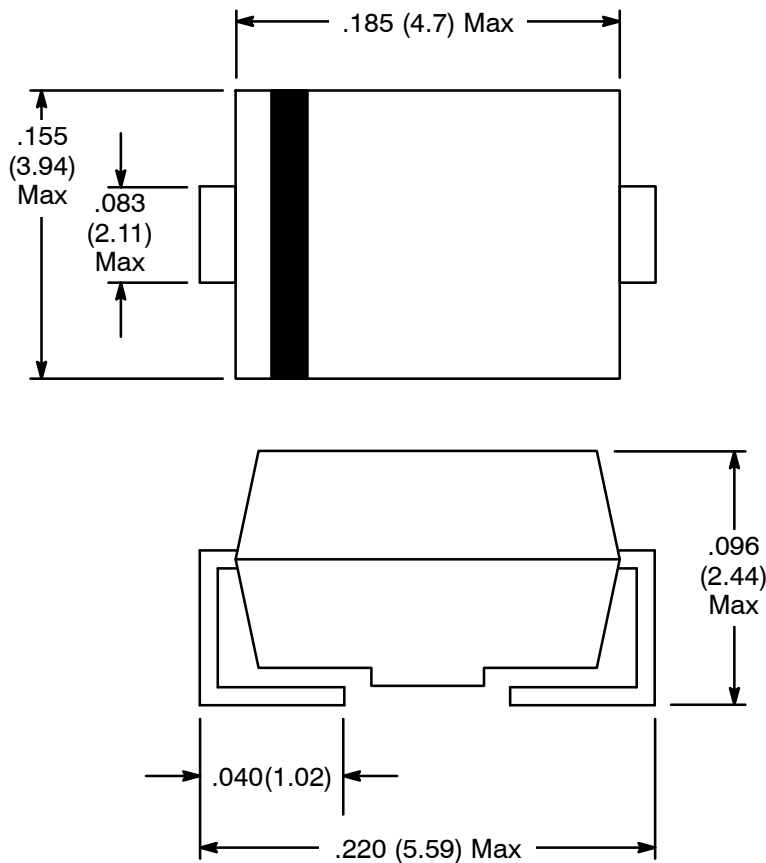
$80^\circ\text{C/W}$

Thermal Resistance, Junction-to-Lead (Note 1),  $R_{thJL}$  .....

$24^\circ\text{C/W}$

Note 1. Mounted on FR-4 PCB with 8.0 x 8.0mm copper pads.

Note 2. Measured at 1Mhz and applied reverse voltage of 4V DC.



Color Band Denotes Cathode