To learn more about ON Semiconductor, please visit our website at www.onsemi.com

Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor’s system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.
FGA3060ADF
600 V, 30 A Field Stop Trench IGBT

Features
- Maximum Junction Temperature: $T_J = 175^\circ C$
- Positive Temperature Co-efficient for Easy Parallel Operating
- High Current Capability
- Low Saturation Voltage: $V_{CE(sat)} = 1.8 \text{ V(Typ.)} @ I_C = 30 \text{ A}$
- 100% of the Parts Tested for $I_{LM(1)}$
- High Input Impedance
- Fast Switching
- Tighten Parameter Distribution
- RoHS Compliant

General Description
This ADF IGBT series adopted Field Stop Trench 3rd generation IGBT which offer extreme low $V_{CE(sat)}$ and much faster switching characteristics for outstanding efficiency. And this kind of technology is fully optimized to variety PFC (Power Factor Correction) topology: Single boost, Multi channel interleaved etc with over 20KHz switching performance. TO3P package provide Super Low thermal resistance for much wider SOA for system stability.

Applications
- PFC topology for Home appliance: Single Boost, Multi channel Interleaved etc.

Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>FGA3060ADF</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{CES}$</td>
<td>Collector to Emitter Voltage</td>
<td>600</td>
<td>V</td>
</tr>
<tr>
<td>$V_{GES}$</td>
<td>Gate to Emitter Voltage</td>
<td>± 20</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>Transient Gate to Emitter Voltage</td>
<td>± 30</td>
<td>V</td>
</tr>
<tr>
<td>$I_C$</td>
<td>Collector Current @ $T_C = 25^\circ C$</td>
<td>60</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Collector Current @ $T_C = 100^\circ C$</td>
<td>30</td>
<td>A</td>
</tr>
<tr>
<td>$I_{LM(1)}$</td>
<td>Pulsed Collector Current @ $T_C = 25^\circ C$</td>
<td>90</td>
<td>A</td>
</tr>
<tr>
<td>$I_{CM(2)}$</td>
<td>Pulsed Collector Current</td>
<td>90</td>
<td>A</td>
</tr>
<tr>
<td>$I_F(3)$</td>
<td>Diode Forward Current @ $T_C = 25^\circ C$</td>
<td>3</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Diode Forward Current @ $T_C = 100^\circ C$</td>
<td>1.5</td>
<td>A</td>
</tr>
<tr>
<td>$I_{FM(2)}$</td>
<td>Pulsed Diode Maximum Forward Current</td>
<td>6</td>
<td>A</td>
</tr>
<tr>
<td>$P_D$</td>
<td>Maximum Power Dissipation @ $T_C = 25^\circ C$</td>
<td>176</td>
<td>W</td>
</tr>
<tr>
<td></td>
<td>Maximum Power Dissipation @ $T_C = 100^\circ C$</td>
<td>88</td>
<td>W</td>
</tr>
<tr>
<td>$T_J$</td>
<td>Operating Junction Temperature</td>
<td>-55 to +175</td>
<td>^\circ C</td>
</tr>
<tr>
<td>$T_{stg}$</td>
<td>Storage Temperature Range</td>
<td>-55 to +175</td>
<td>^\circ C</td>
</tr>
<tr>
<td>$T_L$</td>
<td>Maximum Lead Temp. for soldering Purposes, 1/8” from case for 5 seconds</td>
<td>300</td>
<td>^\circ C</td>
</tr>
</tbody>
</table>

Notes:
1. $V_{CC} = 400 \text{ V, } V_{GE} = 15 \text{ V, } I_C = 90 \text{ A, } R_D = 120 \Omega$, Inductive Load.
2. Repetitive rating: Pulse width limited by max. junction temperature.
3. The purpose of diode is protection for negative voltage.
### Thermal Characteristics

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Parameter</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R_{thJC(IGBT)}$</td>
<td>Thermal Resistance, Junction to Case, Max.</td>
<td>FGA3060ADF</td>
<td>0.85</td>
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<tr>
<td>$R_{thJC(Diode)}$</td>
<td>Thermal Resistance, Junction to Case, Max.</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>$R_{thJA}$</td>
<td>Thermal Resistance, Junction to Ambient, Max.</td>
<td></td>
<td>40</td>
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### Package Marking and Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Top Mark</th>
<th>Package</th>
<th>Packing Method</th>
<th>Reel Size</th>
<th>Tape Width</th>
<th>Quantity</th>
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</thead>
<tbody>
<tr>
<td>FGA3060ADF</td>
<td>FGA3060ADF</td>
<td>TO-3PN</td>
<td>Tube</td>
<td>-</td>
<td>-</td>
<td>30</td>
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</table>

### Electrical Characteristics of the IGBT  \( T_C = 25°C \) unless otherwise noted

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$B\text{VCES}$</td>
<td>Collector to Emitter Breakdown Voltage $V_{GE} = 0 \text{ V}, I_C = 1 \text{ mA}$</td>
<td>$V_{GE} = 0 \text{ V}, I_C = 1 \text{ mA}$</td>
<td>600</td>
<td>-</td>
<td>-</td>
<td>V</td>
</tr>
<tr>
<td>$\Delta B\text{VCES} / \Delta T_J$</td>
<td>Temperature Coefficient of Breakdown Voltage $I_C = 1 \text{ mA, Reference to 25°C}$</td>
<td>$I_C = 1 \text{ mA, Reference to 25°C}$</td>
<td>-</td>
<td>0.52</td>
<td>-</td>
<td>V/°C</td>
</tr>
<tr>
<td>$I_CES$</td>
<td>Collector Cut-Off Current $V_{CE} = V_{CES}, V_{GE} = 0 \text{ V}$</td>
<td>$V_{CE} = V_{CES}, V_{GE} = 0 \text{ V}$</td>
<td>-</td>
<td>-</td>
<td>250</td>
<td>μA</td>
</tr>
<tr>
<td>$I_GES$</td>
<td>G-E Leakage Current $V_{GE} = V_{GES}, V_{CE} = 0 \text{ V}$</td>
<td>$V_{GE} = V_{GES}, V_{CE} = 0 \text{ V}$</td>
<td>-</td>
<td>-</td>
<td>±400</td>
<td>nA</td>
</tr>
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<table>
<thead>
<tr>
<th>Symbol</th>
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<th>Test Conditions</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{GE(\text{th})}$</td>
<td>G-E Threshold Voltage $I_C = 30 \text{ mA, } V_{CE} = V_{GE}$</td>
<td>$I_C = 30 \text{ mA, } V_{CE} = V_{GE}$</td>
<td>4.1</td>
<td>5.6</td>
<td>7.6</td>
<td>V</td>
</tr>
<tr>
<td>$V_{CE(\text{sat})}$</td>
<td>Collector to Emitter Saturation Voltage $I_C = 30 \text{ A, } V_{GE} = 15 \text{ V}$</td>
<td>$I_C = 30 \text{ A, } V_{GE} = 15 \text{ V}$</td>
<td>-</td>
<td>1.8</td>
<td>2.3</td>
<td>V</td>
</tr>
<tr>
<td>$V_{CES}$</td>
<td>Collector Cut-Off Voltage $V_{CE} = V_{CES}, V_{GE} = 0 \text{ V}$</td>
<td>$I_C = 30 \text{ A, } V_{GE} = 15 \text{ V}, T_{C} = 175\text{°C}$</td>
<td>-</td>
<td>2.4</td>
<td>-</td>
<td>V</td>
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<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Unit</th>
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<tbody>
<tr>
<td>$C_{ies}$</td>
<td>Input Capacitance</td>
<td>$V_{CE} = 30 \text{ V, } V_{GE} = 0 \text{ V}, f = 1\text{MHz}$</td>
<td>-</td>
<td>1072</td>
<td>-</td>
<td>pF</td>
</tr>
<tr>
<td>$C_{oes}$</td>
<td>Output Capacitance</td>
<td>$V_{CE} = 30 \text{ V, } V_{GE} = 0 \text{ V}, f = 1\text{MHz}$</td>
<td>-</td>
<td>36</td>
<td>-</td>
<td>pF</td>
</tr>
<tr>
<td>$C_{res}$</td>
<td>Reverse Transfer Capacitance</td>
<td>$V_{CE} = 30 \text{ V, } V_{GE} = 0 \text{ V}, f = 1\text{MHz}$</td>
<td>-</td>
<td>13</td>
<td>-</td>
<td>pF</td>
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### Dynamic Characteristics

<table>
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<tr>
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<th>Test Conditions</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$I_{d(on)}$</td>
<td>Turn-On Delay Time</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 25\text{°C}$</td>
<td>12</td>
<td>19.2</td>
<td>-</td>
<td>ns</td>
</tr>
<tr>
<td>$I_T$</td>
<td>Rise Time</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 25\text{°C}$</td>
<td>42.4</td>
<td>-</td>
<td>-</td>
<td>ns</td>
</tr>
<tr>
<td>$I_{d(\text{off})}$</td>
<td>Turn-Off Delay Time</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 25\text{°C}$</td>
<td>7.2</td>
<td>6.3</td>
<td>-</td>
<td>ns</td>
</tr>
<tr>
<td>$E_{on}$</td>
<td>Turn-On Switching Loss</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 25\text{°C}$</td>
<td>960</td>
<td>-</td>
<td>-</td>
<td>uJ</td>
</tr>
<tr>
<td>$E_{off}$</td>
<td>Turn-Off Switching Loss</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 25\text{°C}$</td>
<td>165</td>
<td>-</td>
<td>-</td>
<td>uJ</td>
</tr>
<tr>
<td>$E_{ts}$</td>
<td>Total Switching Loss</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 25\text{°C}$</td>
<td>1125</td>
<td>-</td>
<td>-</td>
<td>uJ</td>
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### Switching Characteristics

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$I_{d(on)}$</td>
<td>Turn-On Delay Time</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 175\text{°C}$</td>
<td>12.8</td>
<td>12.8</td>
<td>-</td>
<td>ns</td>
</tr>
<tr>
<td>$I_T$</td>
<td>Rise Time</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 175\text{°C}$</td>
<td>27.2</td>
<td>27.2</td>
<td>-</td>
<td>ns</td>
</tr>
<tr>
<td>$I_{d(\text{off})}$</td>
<td>Turn-Off Delay Time</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 175\text{°C}$</td>
<td>46.4</td>
<td>46.4</td>
<td>-</td>
<td>ns</td>
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<tr>
<td>$I_T$</td>
<td>Rise Time</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 175\text{°C}$</td>
<td>12.8</td>
<td>12.8</td>
<td>-</td>
<td>ns</td>
</tr>
<tr>
<td>$E_{on}$</td>
<td>Turn-On Switching Loss</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 175\text{°C}$</td>
<td>1430</td>
<td>-</td>
<td>-</td>
<td>uJ</td>
</tr>
<tr>
<td>$E_{off}$</td>
<td>Turn-Off Switching Loss</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 175\text{°C}$</td>
<td>310</td>
<td>-</td>
<td>-</td>
<td>uJ</td>
</tr>
<tr>
<td>$E_{ts}$</td>
<td>Total Switching Loss</td>
<td>$V_{CC} = 400 \text{ V, } I_C = 30 \text{ A, } R_G = 6 \text{ Ω, } V_{GE} = 15 \text{ V, Inductive Load, } T_{C} = 175\text{°C}$</td>
<td>1740</td>
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<td>uJ</td>
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### Electrical Characteristics of the IGBT

(Continued)

<table>
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<tr>
<th>Symbol</th>
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<th>Test Conditions</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$Q_g$</td>
<td>Total Gate Charge</td>
<td>$V_{CE} = 400 , \text{V}$, $I_C = 30 , \text{A}$, $V_{GE} = 15 , \text{V}$</td>
<td>-</td>
<td>37.4</td>
<td>-</td>
<td>nC</td>
</tr>
<tr>
<td>$Q_{ge}$</td>
<td>Gate to Emitter Charge</td>
<td>$V_{CE} = 400 , \text{V}$, $I_C = 30 , \text{A}$, $V_{GE} = 15 , \text{V}$</td>
<td>-</td>
<td>7.2</td>
<td>-</td>
<td>nC</td>
</tr>
<tr>
<td>$Q_{gc}$</td>
<td>Gate to Collector Charge</td>
<td>$V_{CE} = 400 , \text{V}$, $I_C = 30 , \text{A}$, $V_{GE} = 15 , \text{V}$</td>
<td>-</td>
<td>15</td>
<td>-</td>
<td>nC</td>
</tr>
</tbody>
</table>

### Electrical Characteristics of the Diode

$T_C = 25^\circ\text{C}$ unless otherwise noted

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{FM}$</td>
<td>Diode Forward Voltage</td>
<td>$I_F = 3 , \text{A}$</td>
<td>$T_C = 25^\circ\text{C}$</td>
<td>-</td>
<td>1.6</td>
<td>2.3</td>
</tr>
<tr>
<td>$E_{rec}$</td>
<td>Reverse Recovery Energy</td>
<td>$T_C = 25^\circ\text{C}$</td>
<td>-</td>
<td>1.4</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>$\tau_{rr}$</td>
<td>Diode Reverse Recovery Time</td>
<td>$T_C = 25^\circ\text{C}$</td>
<td>-</td>
<td>29.7</td>
<td>-</td>
<td>uJ</td>
</tr>
<tr>
<td>$Q_{rr}$</td>
<td>Diode Reverse Recovery Charge</td>
<td>$T_C = 25^\circ\text{C}$</td>
<td>-</td>
<td>35</td>
<td>-</td>
<td>nC</td>
</tr>
</tbody>
</table>

| $I_F = 3 \, \text{A}$, $dI_F/dt = 200 \, \text{A/\mu s}$, $V_R = 400 \, \text{V}$ | $T_C = 175^\circ\text{C}$ | 26   | -    |      | ns   |
| $I_F = 3 \, \text{A}$, $dI_F/dt = 200 \, \text{A/\mu s}$, $V_R = 400 \, \text{V}$ | $T_C = 175^\circ\text{C}$ | 153  | -    |      |      |
| $T_C = 25^\circ\text{C}$ | -    | 35   | -    | nC   |
| $T_C = 175^\circ\text{C}$ | -    | 305  | -    |      |
Typical Performance Characteristics

Figure 1. Typical Output Characteristics

Figure 2. Typical Output Characteristics

Figure 3. Typical Saturation Voltage Characteristics

Figure 4. Saturation Voltage vs. Case Temperature at Variant Current Level

Figure 5. Saturation Voltage vs. $V_{GE}$

Figure 6. Saturation Voltage vs. $V_{GE}$
Typical Performance Characteristics

Figure 7. Capacitance Characteristics
- Collector-Emitter Voltage, $V_{CE}$ vs. Capacitance, $C_{ies}$, $C_{oss}$, $C_{res}$
- Common Emitter
  - $V_{GE} = 0V$, $f = 1MHz$
  - $T_C = 25^\circ C$

Figure 8. Gate charge Characteristics
- Gate-Emitter Voltage, $V_{GE}$ vs. Gate charge, $Q_g$
- $V_{CC} = 200V$, $400V$
- Common Emitter
  - $T_C = 25^\circ C$

Figure 9. Turn-on Characteristics vs. Gate Resistance
- Switching Time, $t_{on}$, $t_{off}$ vs. Gate Resistance, $R_G$
- Common Emitter
  - $V_{CC} = 400V$, $V_{GE} = 15V$
  - $I_C = 30A$
  - $T_C = 25^\circ C$
  - $T_C = 175^\circ C$

Figure 10. Turn-off Characteristics vs. Gate Resistance
- Switching Time, $t_{off}$ vs. Gate Resistance, $R_G$
- Common Emitter
  - $V_{CC} = 400V$, $V_{GE} = 15V$
  - $I_C = 30A$
  - $T_C = 25^\circ C$
  - $T_C = 175^\circ C$

Figure 11. Switching Loss vs. Gate Resistance
- Switching Loss, $E_{on}$, $E_{off}$ vs. Gate Resistance, $R_G$
- Common Emitter
  - $V_{CC} = 400V$, $V_{GE} = 15V$
  - $I_C = 30A$
  - $T_C = 25^\circ C$
  - $T_C = 175^\circ C$

Figure 12. Turn-on Characteristics vs. Collector Current
- Switching Time, $t_{on}$ vs. Collector Current, $I_C$
- Common Emitter
  - $V_{GE} = 15V$, $R_G = 6\Omega$
  - $T_C = 25^\circ C$
  - $T_C = 175^\circ C$
Typical Performance Characteristics

Figure 13. Turn-off Characteristics vs. Collector Current

Switching Time [ns] vs. Collector Current, Ic [A]

Common Emitter

- $V_{GE} = 15V, R_G = 6\Omega$
- $T_C = 25^\circ C$
- $T_C = 175^\circ C$

Figure 14. Switching Loss vs. Collector Current

Switching Loss [uJ] vs. Collector Current, Ic [A]

Common Emitter

- $V_{GE} = 15V, R_G = 6\Omega$
- $T_C = 25^\circ C$
- $T_C = 175^\circ C$

Figure 15. Load Current Vs. Frequency

Collector Current, [A] vs. Switching Frequency, f [Hz]

Square Wave

- $T_J \leq 175^\circ C$, D = 0.5, $V_{CE} = 400V$
- $V_{GE} = 15/0V, R_G = 6\Omega$
- $T_C = 25^\circ C$
- $T_C = 75^\circ C$
- $T_C = 100^\circ C$

Figure 16. SOA Characteristics

Collector Current, Ic [A] vs. Collector-Emitter Voltage, $V_{CE}$ [V]

Notes:
1. $T_C = 25^\circ C$
2. $T_J = 175^\circ C$
3. Single Pulse

Figure 17. Forward Characteristics

Forward Current, If [A] vs. Forward Voltage, $V_F$ [V]

- $T_C = 175^\circ C$
- $T_C = 25^\circ C$
- $T_C = 75^\circ C$

Figure 18. Reverse Recovery Current

Reverse Recovery Current, Irf [A] vs. Forward Current, If [A]

- $T_C = 25^\circ C$
- $T_C = 175^\circ C$
- $di/dt = 200A/\mu s$
- $di/dt = 100A/\mu s$
**Typical Performance Characteristics**

**Figure 19. Reverse Recovery Time**

TC = 25°C  
TC = 175°C

Reverse Recovery Time, $t_{rr}$ [ns]

<table>
<thead>
<tr>
<th>Forward Current, $I_F$ [A]</th>
<th>0</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>$t_{rr}$</td>
<td>0</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>400</td>
</tr>
</tbody>
</table>

di/dt = 100A/$\mu$s  
di/dt = 200A/$\mu$s

**Figure 20. Stored Charge**

TC = 25°C  
TC = 175°C

Stored Recovery Charge, $Q_{rr}$ [nC]

<table>
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<tr>
<th>Forward Current, $I_F$ [A]</th>
<th>0</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>$Q_{rr}$</td>
<td>0</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>400</td>
</tr>
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</table>

di/dt = 100A/$\mu$s  
di/dt = 200A/$\mu$s

**Figure 21. Transient Thermal Impedance of IGBT**

Duty Factor, $D = t_1/t_2$

Peak $T_J = P_{DM} \times Z_{thjc} + T_C$

**Figure 22. Transient Thermal Impedance of Diode**

Duty Factor, $D = t_1/t_2$

Peak $T_J = P_{DM} \times Z_{thjc} + T_C$
Mechanical Dimensions

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Figure 23. TO-3P 3L - 3LD, T03, PLASTIC, EIAJ SC-65
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<th>Product Status</th>
<th>Definition</th>
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