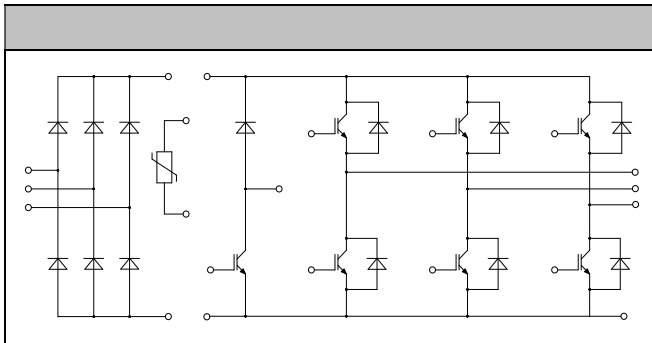




C

**120V**  
**15A**

**MicroDives**  
**AC and DC save drive amplifier**  
**UPS (Uninterruptible Power Supplies)**



**Low switching losses**  
**Low  $V_{CE(sat)}$  with positive temperature coefficient**  
**Including fast & soft recovery anti-parallel FWD**  
**Low inductance case**  
**High short-circuit capability (10s)**  
**Maximum junction temperature 175°C**

<b>Collector-Emitter Voltage</b>	<b><math>V_{CES}</math></b>	<b><math>V_{CE}=0V, I_C=1mA, T_J=25</math></b>	<b>120</b>	<b>V</b>
<b>Continuous Collector Current</b>	<b><math>I_C</math></b>	<b><math>T_C=100</math> <math>T_{Jmax}=175</math></b>	<b>15</b>	<b>A</b>
<b>Repetitive Peak Collector Current</b>	<b><math>I_{CM}</math></b>	<b><math>t_p=1ms</math></b>	<b>30</b>	<b>A</b>
<b>Gate-Emitter Voltage</b>	<b><math>V_{GES}</math></b>	<b><math>T_J=25</math></b>	<b>20</b>	<b>V</b>
<b>Total Power Dissipation</b>	<b><math>P_{tot}</math></b>	<b><math>T_C=25</math> <math>T_{Jmax}=175</math></b>	<b>142</b>	<b>W</b>

<b>Gate-emitter Threshold Voltage</b>	$V_{GE(th)}$	$V_{GE}=V_{CE}, I_C=0.5mA, T_j=25$	<b>52</b>	<b>60</b>	<b>68</b>	<b>V</b>	
<b>Collector-Emitter Cutoff Current</b>	$I_{CS}$	$V_{CE}=120V, V_{GE}=0V, T_j=25$			<b>10</b>	<b>mA</b>	
<b>Collector-Emitter Saturation Voltage</b>	$V_{CE(sat)}$	$I_C=15A, V_{GE}=15V, T_j=25$		<b>185</b>	<b>220</b>	<b>V</b>	
		$I_C=15A, V_{GE}=15V, T_j=125$		<b>215</b>			
		$I_C=15A, V_{GE}=15V, T_j=150$		<b>225</b>			
<b>Gate Charge</b>	$Q_g$			<b>015</b>		<b>μC</b>	
<b>Input Capacitance</b>	$C_{is}$	$V_{CE}=25V, V_{GE}=0V$		<b>11</b>		<b>nF</b>	
<b>Reverse Transfer Capacitance</b>	$C_{rs}$	$f=1MHz, T_j=25$		<b>004</b>		<b>nF</b>	
<b>Gate-Emitter leakage current</b>	$I_{GS}$	$V_{GE}=0V, V_{CE}=20V, T_j=25$			<b>40</b>	<b>nA</b>	
<b>Turnon Delay/line</b>	$t_{on}$	$I_C=15A$ $V_{CE}=60V$ $V_{GE}=\pm 15V$ $R_{\theta}=3\Omega$ $T_j=25$		<b>90</b>		<b>ns</b>	
<b>Rise time</b>	$t_r$			<b>61</b>		<b>ns</b>	
<b>Turnoff Delay/line</b>	$t_{off}$			<b>180</b>		<b>ns</b>	
<b>Fall time</b>	$t_f$			<b>135</b>		<b>ns</b>	
<b>Energy Dissipation During Turnon/line</b>	$E_{on}$			<b>142</b>		<b>nJ</b>	
<b>Energy Dissipation During Turnoff/line</b>	$E_{off}$			<b>078</b>		<b>nJ</b>	
<b>Turnon Delay/line</b>	$t_{on}$		$I_C=15A$ $V_{CE}=60V$ $V_{GE}=\pm 15V$ $R_{\theta}=3\Omega$ $T_j=125$		<b>95</b>		<b>ns</b>
<b>Rise time</b>	$t_r$				<b>70</b>		<b>ns</b>
<b>Turnoff Delay/line</b>	$t_{off}$				<b>260</b>		<b>ns</b>
<b>Fall time</b>	$t_f$				<b>180</b>		<b>ns</b>
<b>Energy Dissipation During Turnon/line</b>	$E_{on}$			<b>185</b>		<b>nJ</b>	
<b>Energy Dissipation During Turnoff/line</b>	$E_{off}$			<b>113</b>		<b>nJ</b>	
<b>SCData</b>	$I_C$	$T_p=10s, V_{GE}=15V, T_j=150, V_{CE}=90V, V_{CEM}=120V$		<b>90</b>		<b>A</b>	



<b>Repetitive Peak Reverse Voltage</b>	<b><math>V_{RRM}</math></b>	<b><math>T_j=25</math></b>	<b>120</b>	<b>V</b>
<b>Continuous DC Forward Current</b>	<b><math>I_F</math></b>		<b>15</b>	<b>A</b>
<b>Repetitive Peak Forward Current</b>	<b><math>I_{FRM}</math></b>	<b><math>t_f=1ms</math></b>	<b>30</b>	<b>A</b>
<b>R<sub>th</sub> value</b>	<b>R<sub>th</sub></b>	<b><math>V_F=0, t_f=10ms, T_j=125</math></b>	<b>160</b>	<b>As</b>
		<b><math>V_F=0, t_f=10ms, T_j=150</math></b>	<b>140</b>	

<b>Forward Voltage</b>	<b><math>V_F</math></b>	<b><math>I_F=15A, T_j=25</math></b>		<b>200</b>	<b>265</b>
		<b><math>I_F=15A, T_j=125</math></b>		<b>210</b>	
		<b><math>I_F=15A, T_j=150</math></b>		<b>210</b>	
<b>Recovered Charge</b>	<b><math>Q_r</math></b>	<b><math>I_F=15A</math></b>		<b>120</b>	<b><math>\mu C</math></b>
<b>Peak Reverse Recovery Current</b>	<b><math>I_r</math></b>	<b><math>V_F=60V</math> <b><math>-d_F/dt=60A/\mu s</math></b></b>		<b>130</b>	<b>A</b>
<b>Reverse Recovery Energy</b>	<b><math>E_{rec}</math></b>	<b><math>T_j=25</math></b>		<b>037</b>	<b>mJ</b>
<b>Recovered Charge</b>	<b><math>Q_r</math></b>	<b><math>I_F=15A</math></b>		<b>205</b>	<b><math>\mu C</math></b>
<b>Peak Reverse Recovery Current</b>	<b><math>I_r</math></b>	<b><math>V_F=60V</math> <b><math>-d_F/dt=60A/\mu s</math></b></b>		<b>120</b>	<b>A</b>
<b>Reverse Recovery Energy</b>	<b><math>E_{rec}</math></b>	<b><math>T_j=125</math></b>		<b>068</b>	<b>mJ</b>

<b>Collector-Emitter Voltage</b>	$V_{CES}$	$V_{CE}=0V, I_C=1mA, T_j=25$	<b>120</b>	<b>V</b>
<b>Continuous Collector Current</b>	$I_C$	$T_C=100, \nu_{max}=15$	<b>15</b>	<b>A</b>
<b>Repetitive Peak Collector Current</b>	$I_{CM}$	$t_p=1ms$	<b>30</b>	<b>A</b>
<b>Gate-Emitter Voltage</b>	$V_{GES}$	$T_j=25$	<b>20</b>	<b>V</b>
<b>Total Power Dissipation</b>	$P_{tot}$	$T_C=25, T_{jmax}=175$	<b>15</b>	<b>W</b>

<b>Gate-emitter Threshold Voltage</b>	$V_{GE(th)}$	$V_{GE}=V_{CE}, I_C=0.5mA, T_j=25$	<b>52</b>	<b>60</b>	<b>68</b>	<b>V</b>
<b>Collector-Emitter Cut-off Current</b>	$I_{CES}$	$V_{CE}=120V, V_{GE}=0V, T_j=25$			<b>10</b>	<b>nA</b>
<b>Collector-Emitter Saturation Voltage</b>	$V_{CE(sat)}$	$I_C=15A, V_{GE}=15V, T_j=25$		<b>185</b>	<b>225</b>	<b>V</b>
		$I_C=15A, V_{GE}=15V, T_j=125$		<b>215</b>		
		$I_C=15A, V_{GE}=15V, T_j=150$		<b>225</b>		
<b>Gate Charge</b>	$Q_g$			<b>009</b>		<b><math>\mu C</math></b>
<b>Input Capacitance</b>	$C_{is}$	$V_{CE}=25V, V_{GE}=0V$		<b>135</b>		<b>pF</b>
<b>Reverse Transfer Capacitance</b>	$C_{res}$	$f=1MHz, T_j=25$		<b>008</b>		<b>pF</b>
<b>Gate-Emitter Leakage current</b>	$I_{GES}$	$V_{CE}=0V, V_{GE}=20V, T_j=25$			<b>40</b>	<b>nA</b>
<b>Turn-on Delay/line</b>	$t_{on}$	$I_C=15A$ $V_{CE}=60V$ $V_{GE}=\pm 15V$ $R_g=3\Omega$ $T_j=25$		<b>46</b>		<b>ns</b>
<b>Rise Time</b>	$t_r$			<b>45</b>		<b>ns</b>
<b>Turn-off Delay/line</b>	$t_{off}$			<b>182</b>		<b>ns</b>
<b>Fall Time</b>	$t_f$			<b>168</b>		<b>ns</b>
<b>Energy Dissipation During Turn-on</b>	$E_{on}$			<b>092</b>		<b>nJ</b>
<b>Energy Dissipation During Turn-off</b>	$E_{off}$			<b>056</b>		<b>nJ</b>







<b>Isolation Voltage</b>	<b>V<sub>isd</sub></b>	<b>t=1min@50Hz</b>	<b>250</b>		<b>V</b>
<b>Minimum Junction Temperature</b>	<b>T<sub>jmin</sub></b>			<b>175</b>	
<b>Operating Junction Temperature</b>	<b>T<sub>jq</sub></b>		<b>-40</b>	<b>150</b>	
<b>Storage Temperature</b>	<b>T<sub>stg</sub></b>		<b>-40</b>	<b>125</b>	
<b>Storage Inductance</b>	<b>L<sub>sc</sub></b>			<b>60</b>	

<b>Thermal Resistance Junction to Case</b>	<b>R<sub>jc</sub></b>	per GBF meter			
		per Dole copper			
		per Dole redifier			
<b>Thermal Resistance Case to Sink</b>	<b>R<sub>cs</sub></b>	per GBF meter		<b>041</b>	<b>KW</b>
		per Dole in meter		<b>051</b>	
		per GBF bare copper		<b>051</b>	
		per Dole copper		<b>051</b>	

