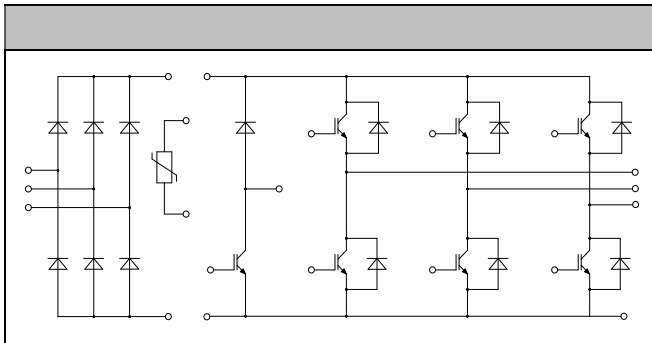




C

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

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



Gate-emitter Threshold Voltage	$V_{GE(th)}$	$V_{GE}=V_{CE}, I_C=0.5mA, T_j=25$	52	60	68	V	
Collector-Emitter Cutoff Current	I_{CS}	$V_{CE}=120V, V_{GE}=0V, T_j=25$			10	mA	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=15A, V_{GE}=15V, T_j=25$		185	220	V	
		$I_C=15A, V_{GE}=15V, T_j=125$		215			
		$I_C=15A, V_{GE}=15V, T_j=150$		225			
Gate Charge	Q_g			015		μC	
Input Capacitance	C_{is}	$V_{CE}=25V, V_{GE}=0V$		11		nF	
Reverse Transfer Capacitance	C_{rs}	$f=1MHz, T_j=25$		004		nF	
Gate-Emitter leakage current	I_{GS}	$V_{GE}=0V, V_{CE}=20V, T_j=25$			40	nA	
Turnon Delay/line	t_{on}	$I_C=15A$ $V_{CE}=60V$ $V_{GE}=\pm 15V$ $R_{\theta}=3\Omega$ $T_j=25$		90		ns	
Rise time	t_r			64		ns	
Turnoff Delay/line	t_{off}			180		ns	
Fall time	t_f			135		ns	
Energy Dissipation During Turnon/line	E_{on}			142		nJ	
Energy Dissipation During Turnoff/line	E_{off}			078		nJ	
Turnon Delay/line	t_{on}		$I_C=15A$ $V_{CE}=60V$ $V_{GE}=\pm 15V$ $R_{\theta}=3\Omega$ $T_j=125$		95		ns
Rise time	t_r				70		ns
Turnoff Delay/line	t_{off}				260		ns
Fall time	t_f				180		ns
Energy Dissipation During Turnon/line	E_{on}			185		nJ	
Energy Dissipation During Turnoff/line	E_{off}			113		nJ	
SCData	I_C	$T_p=10s, V_{GE}=15V, T_j=150, V_{CE}=90V, V_{CEM}=120V$		90		A	



Repetitive Peak Reverse Voltage	V_{RRM}	T_J=25	120	V
Continuous DC Forward Current	I_F		15	A
Repetitive Peak Forward Current	I_{FRM}	t_F=1ms	30	A
R_{th} value	R_{th}	V_F=0, t_F=10ms, T_J=125	160	As
		V_F=0, t_F=10ms, T_J=150	140	

Forward Voltage	V_F	I_F=15A, T_J=25	200	265	V
		I_F=15A, T_J=125	210		
		I_F=15A, T_J=150	210		
Recovered Charge	Q_r	I_F=15A	120		uC
Peak Reverse Recovery Current	I_r	V_F=60V -d_F/d_t=60A/us	130		A
Reverse Recovery Energy	E_{rec}	T_J=25	037		nJ
Recovered Charge	Q_r	I_F=15A	205		uC
Peak Reverse Recovery Current	I_r	V_F=60V -d_F/d_t=60A/us	120		A
Reverse Recovery Energy	E_{rec}	T_J=125	068		nJ



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

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







Isolation Voltage	V_{isd}	t=1min@50Hz	250		V
Minimum Junction Temperature	T_{jmin}			175	
Operating Junction Temperature	T_{jq}		-40	150	
Storage Temperature	T_{stg}		-40	125	
Storage Inductance	L_{sc}			60	

Thermal Resistance Junction to Case	R_{jc}	per GBF meter			
		per Dole copper			
		per Dole redifier			
Thermal Resistance Case to Sink	R_{cs}	per GBF meter		041	KW
		per Dole meter		051	
		per GBF bare copper		051	
		per Dole copper		051	

