

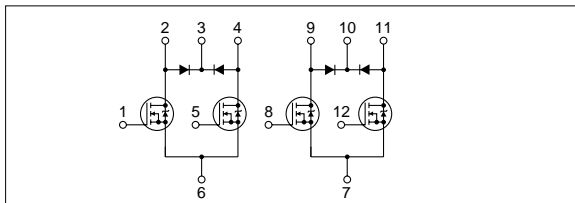
#### Absolute maximum ratings

(Ta=25°C)

Symbol	Ratings	Unit
V <sub>DSS</sub>	100	V
V <sub>GSS</sub>	±20	V
I <sub>D</sub>	±4	A
I <sub>D(pulse)</sub>	±8 (PW≤1ms)	A
E <sub>AS*</sub>	16	mJ
I <sub>F</sub>	4 (PW≤0.5ms, D≤25%)	A
I <sub>FSM</sub>	8 (PW≤10ms, Single pulse)	A
V <sub>R</sub>	120	V
P <sub>T</sub>	5 (Ta=25°C, with all circuits operating, without heatsink)	W
	35 (Tc=25°C, with all circuits operating, with infinite heatsink)	W
θ <sub>j-a</sub>	25 (Junction-Air, Ta=25°C, with all circuits operating)	°C/W
θ <sub>j-c</sub>	3.57 (Junction-Case, Tc=25°C, with all circuits operating)	°C/W
V <sub>ISO</sub>	1000 (Between fin and lead pin, AC)	V <sub>rms</sub>
T <sub>ch</sub>	150	°C
T <sub>stg</sub>	-40 to +150	°C

\* : V<sub>DD</sub>=20V, L=1mH, I<sub>D</sub>=5A, unclamped, see Fig. E on page 15.

#### Equivalent circuit diagram



#### Characteristic curves

#### Electrical characteristics

(Ta=25°C)

Symbol	Specification			Unit	Conditions
	min	typ	max		
V <sub>(BR)DSS</sub>	100			V	I <sub>D</sub> =250μA, V <sub>GS</sub> =0V
I <sub>GSS</sub>			±500	nA	V <sub>GS</sub> =±20V
I <sub>DSS</sub>			250	μA	V <sub>DS</sub> =100V, V <sub>GS</sub> =0V
V <sub>TH</sub>	2.0		4.0	V	V <sub>DS</sub> =10V, I <sub>D</sub> =250μA
R <sub>e(yfs)</sub>	1.1	1.7		S	V <sub>DS</sub> =10V, I <sub>D</sub> =4A
R <sub>DS(ON)</sub>		0.50	0.60	Ω	V <sub>GS</sub> =10V, I <sub>D</sub> =4A
C <sub>iss</sub>		180		pF	V <sub>DS</sub> =25V, f=1.0MHz, V <sub>GS</sub> =0V
C <sub>oss</sub>		82		pF	
t <sub>on</sub>		40		ns	I <sub>D</sub> =4A, V <sub>DD</sub> =50V, V <sub>GS</sub> =10V, see Fig. 3 on page 16.
t <sub>off</sub>		40		ns	
V <sub>SD</sub>		1.2	2.0	V	I <sub>SD</sub> =4A, V <sub>GS</sub> =0V
t <sub>rr</sub>		250		ns	I <sub>SD</sub> =±100mA

#### Diode for flyback voltage absorption

Symbol	Specification			Unit	Conditions
	min	typ	max		
V <sub>R</sub>	120			V	I <sub>R</sub> =10μA
V <sub>F</sub>		1.0	1.2	V	I <sub>F</sub> =1A
I <sub>R</sub>			10	μA	V <sub>R</sub> =120V
t <sub>rr</sub>		100		ns	I <sub>F</sub> =±100mA