

### Absolute maximum ratings

( $T_a=25^\circ\text{C}$ )

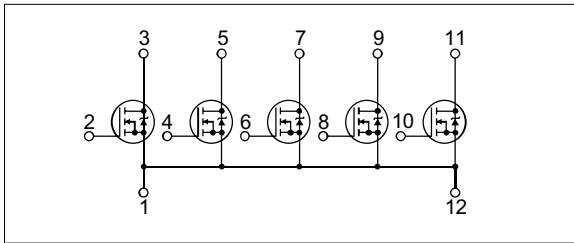
Symbol	Ratings	Unit
$V_{DSS}$	150	V
$V_{GSS}$	+20, -10	V
$I_D$	$\pm 7A$	
$I_D$ (pulse)	$\pm 15$ ( $PV \leq 1\text{ms}$ , duty $\leq 1\%$ )	A
$E_{AS}^*$	100	mJ
$P_T$	5 ( $T_a=25^\circ\text{C}$ , with all circuits operating, without heatsink)	W
	35 ( $T_c=25^\circ\text{C}$ , with all circuits operating, with infinite heatsink)	W
$\theta_{j-a}$	25 (Junction-Air, $T_a=25^\circ\text{C}$ , with all circuits operating)	$^\circ\text{C/W}$
$\theta_{j-c}$	3.57 (Junction-Case, $T_c=25^\circ\text{C}$ , with all circuits operating)	$^\circ\text{C/W}$
$V_{ISO}$	1000 (Between fin and lead pin, AC)	Vrms
$T_{ch}$	150	$^\circ\text{C}$
$T_{stg}$	-40 to +150	$^\circ\text{C}$

\* :  $V_{DD}=25V$ ,  $L=3.4\text{mH}$ ,  $I_D=7A$ , unclamped,  $R_G=50\Omega$

### Electrical characteristics

Symbol	Specification			Unit	Conditions
	min	typ	max		
$V_{(BR)DSS}$	150			V	$I_D=100\mu\text{A}$ , $V_{GS}=0V$
$I_{GSS}$			100	nA	$V_{GS}=20V$
$I_{DSS}$			100	$\mu\text{A}$	$V_{DS}=150V$ , $V_{GS}=0V$
$V_{TH}$	1.0		2.0	V	$V_{DS}=10V$ , $I_D=250\mu\text{A}$
$Re(yfs)$	4	9		S	$V_{DS}=10V$ , $I_D=3.5A$
		150	200	$\text{m}\Omega$	$V_{GS}=10V$ , $I_D=3.5A$
$R_{DS(ON)}$		170	230	$\text{m}\Omega$	$V_{GS}=4V$ , $I_D=3.5A$
	$C_{iss}$		870	pF	$V_{DS}=10V$
$C_{oss}$		320	pF	$f=1.0\text{MHz}$	
$Cr_{ss}$		210	pF	$V_{GS}=0V$	
$td(on)$		25	ns	$I_D=3.5A$	
$tr$		55	ns	$V_{DD} \approx 70V$	
$td(off)$		80	ns	$R_L=20\Omega$	
$tf$		50	ns	$V_{GS}=5V$	
$V_{SD}$		1.0	1.5	V	$I_{SD}=7A$ , $V_{GS}=0V$
$trr$		500	ns		$I_F=\pm 100\text{mA}$

### Equivalent circuit diagram



### Characteristic curves

