

Absolute maximum ratings

(Ta=25°C)

Symbol	Ratings	Unit
V_{DS}	150	V
V_{GS}	±20	V
I_D	±10	A
$I_D(\text{pulse})$	±40 (PW≤1ms, Du≤1%)	A
E_{AS}^*	280	mJ
P_T	5 (Ta=25°C, with all circuits operating, without heatsink)	W
	40 (Tc=25°C, with all circuits operating, with infinite heatsink)	W
θ_{j-a}	25 (Junction-Air, Ta=25°C, with all circuits operating)	°C/W
θ_{j-c}	3.13 (Junction-Case, Tc=25°C, with all circuits operating)	°C/W
V_{ISO}	1000 (Between fin and lead pin, AC)	Vrms
T_{ch}	150	°C
T_{stg}	-40 to +150	°C

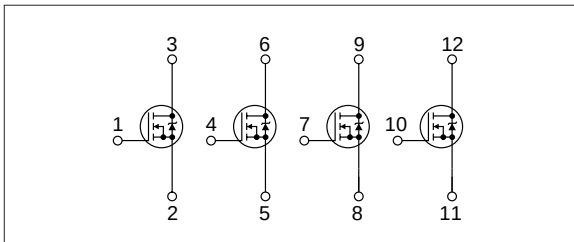
* : $V_{DD}=25V$, $L=4.7mH$, $I_D=10A$, unclamped, $R_G=50\Omega$, see Fig. E on page 15.

Electrical characteristics

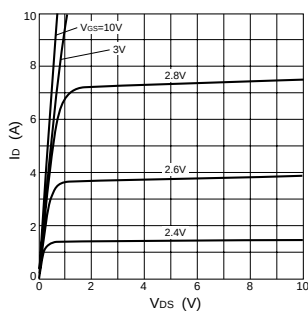
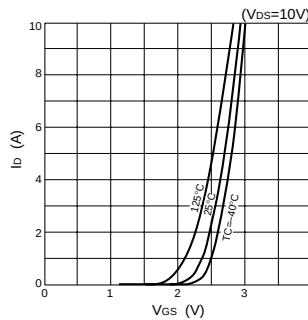
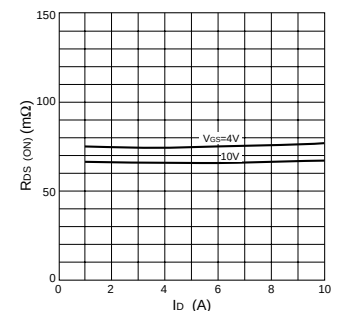
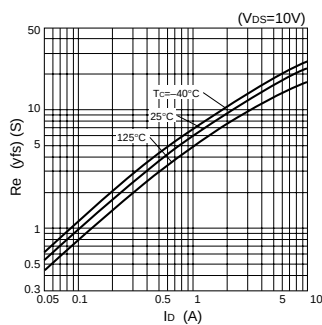
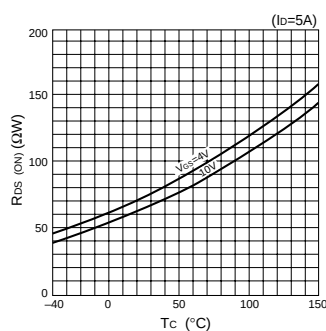
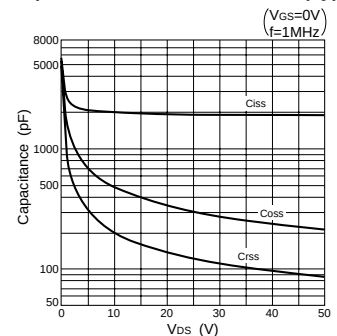
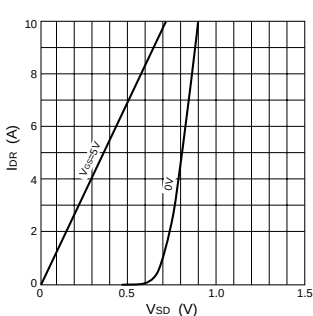
(Ta=25°C)

Symbol	Specification			Unit	Specification
	min	typ	max		
$V_{(BR)DS}$	150			V	$I_D=100\mu A$, $V_{GS}=0V$
I_{GSS}			±100	nA	$V_{GS}=\pm 20V$
I_{DSS}			100	μA	$V_{DS}=150V$, $V_{GS}=0V$
V_{TH}	1.0		2.0	V	$V_{DS}=10V$, $I_D=250\mu A$
$R_{e(yfs)}$	10	15		S	$V_{DS}=10V$, $I_D=5A$
$R_{DS(ON)}$		70	85	m Ω	$V_{GS}=10V$, $I_D=5A$
		80	100	m Ω	$V_{GS}=4V$, $I_D=5A$
C_{iss}		2000		pF	$V_{DS}=10V$, $f=1.0MHz$, $V_{GS}=0V$
C_{oss}		470		pF	
$t_{d(on)}$		35		ns	$I_D=5A$, $V_{DD}\div 70V$, $R_L=14\Omega$, $V_{GS}=5V$, see Fig. 3 on page 16.
t_r		40		ns	
$t_{d(off)}$		150		ns	
t_f		50		ns	
V_{SD}		0.9	1.5	V	$I_{SD}=10A$, $V_{GS}=0V$
t_{rr}		500		ns	$I_{SD}=\pm 100mA$

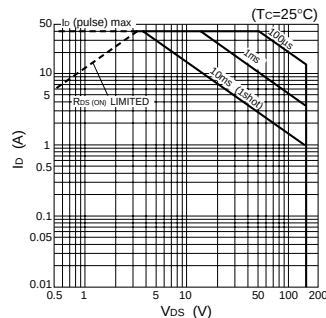
Equivalent circuit diagram



Characteristic curves

 I_D - V_{DS} Characteristics (Typical) I_D - V_{GS} Characteristics (Typical) $R_{DS(ON)}$ - I_D Characteristics (Typical) $R_{e(yfs)}$ - I_D Characteristics (Typical) $R_{DS(ON)}$ - T_c Characteristics (Typical)Capacitance- V_{DS} Characteristics (Typical) I_{DR} - V_{SD} Characteristics (Typical)

Safe Operating Area (SOA)

 P_T - T_a Characteristics