

Absolute maximum ratings

(Ta=25°C)

Symbol	Ratings	Unit
V _{DSS}	150	V
V _{GSS}	+20, -10	V
I _D	±10	A
I _D (pulse)	±40 (PW≤100μs, duty≤1%)	A
E _{AS} *	100	mJ
I _{AS}	10	A
P _T	5 (Ta=25°C, with all circuits operating, without heatsink) 50 (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}	2.5 (Junction-Case, Tc=25°C, with all circuits operating)	°C/W
V _{ISO}	1000 (Between fin and lead pin, AC)	V _{rms}
T _{ch}	150	°C
T _{stg}	-40 to +150	°C

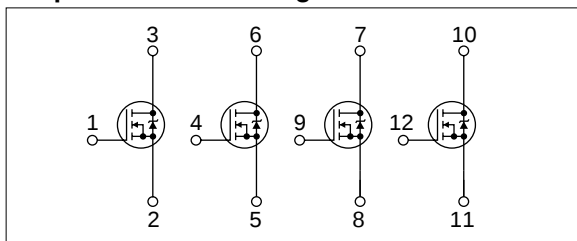
*: V_{DD}=25V, L=1.7mH, I_D=10A, unclamped, R_G=50Ω, see Fig. E on page 15.

Electrical characteristics

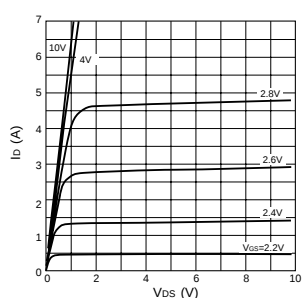
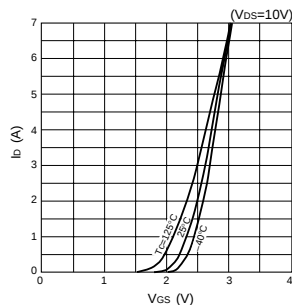
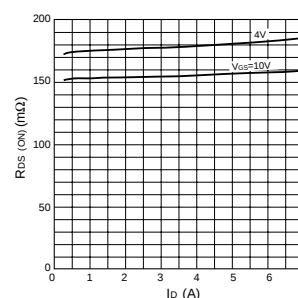
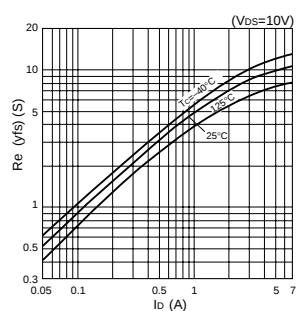
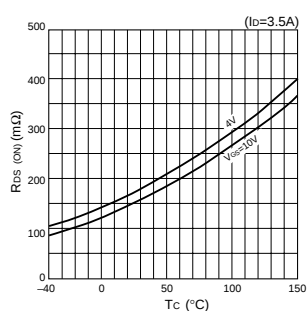
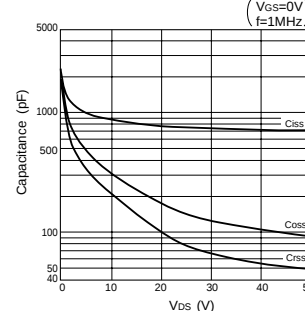
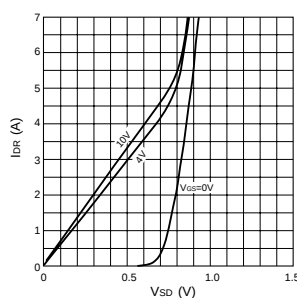
(Ta=25°C)

Symbol	Specification			Unit	Conditions
	min	typ	max		
V _{(BR)DSS}	150			V	I _D =100μA, V _{GS} =0V
I _{GSS}			±100	nA	V _{GS} =20V, -10V
I _{DSS}			100	μA	V _{DS} =150V, V _{GS} =0V
V _{TH}	1.0		2.0	V	V _{DS} =10V, I _D =250μA
Re(yfs)	5	10		S	V _{DS} =10V, I _D =5A
R _{DS(ON)}		150	200	mΩ	V _{GS} =10V, I _D =5A
		170	230	mΩ	V _{GS} =4V, I _D =5A
Ciss		870		pF	V _{DS} =10V, f=1.0MHz, V _{GS} =0V
Coss		320		pF	I _D =5A, V _{DD} ≐70V, R _L =14Ω, V _{GS} =5V, see Fig. 3 on page 16.
Crss		210		pF	
td(on)		25		ns	
tr		50		ns	
td(off)		75		ns	
tf		40		ns	I _{SD} =10A, V _{GS} =0V
V _{SD}		1.0	1.5	V	
t _{rr}		500		ns	I _F =±100mA

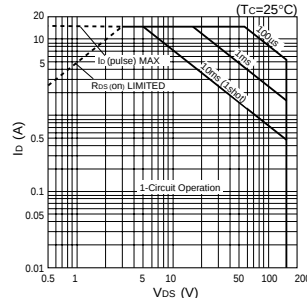
Equivalent circuit diagram



Characteristic curves

I_D-V_{DS} Characteristics (Typical)I_D-V_{GS} Characteristics (Typical)R_{DS(ON)}-I_D Characteristics (Typical)Re(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