

Absolute maximum ratings

(Ta=25°C)

Symbol	Ratings	Unit
V _{DSS}	60	V
V _{GSS}	±20	V
I _D	±5	A
I _D (pulse)	±10(PW≤1ms)	A
E _{AS} *	2	mJ
P _T	5 (Ta=25°C, with all circuits operating, without heatsink)	W
	35 (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}	3.57 (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

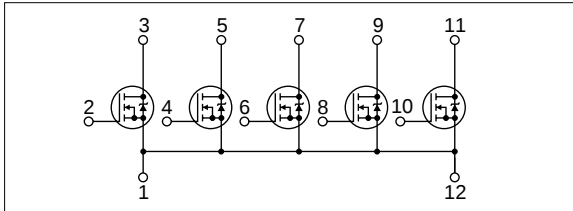
*: V_{DD}=20V, L=1mH, I_D=1.5A, unclamped, see Fig. E on page 15.

Electrical characteristics

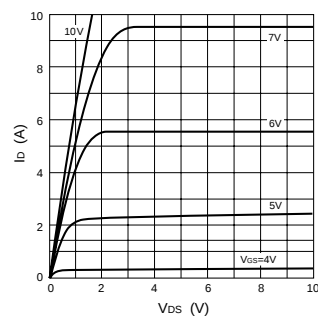
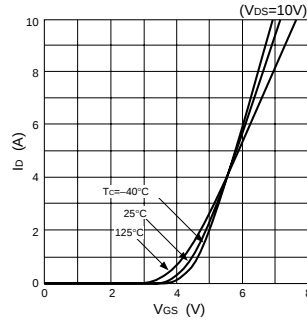
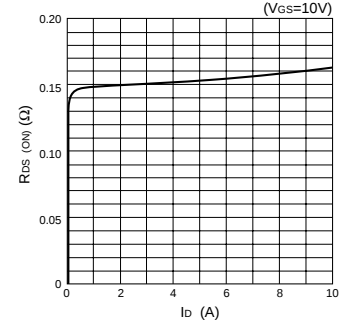
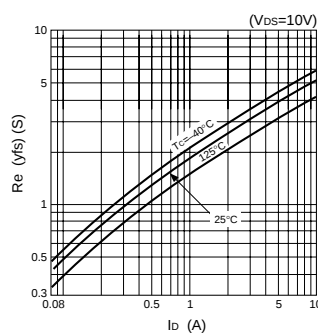
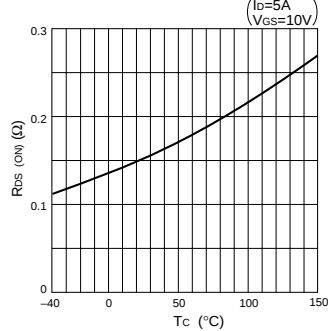
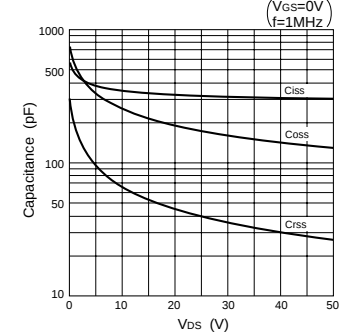
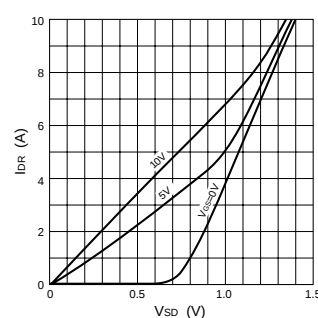
(Ta=25°C)

Symbol	Specification			Unit	Conditions
	min	typ	max		
V _{(BR)DSS}	60			V	I _D =250μA, V _{GS} =0V
I _{GSS}			±500	nA	V _{GS} =±20V
I _{DSS}			250	μA	V _{DS} =60V, V _{GS} =0V
V _{TH}	2.0		4.0	V	V _{DS} =10V, I _D =250μA
R _e (yfs)	2.2	3.3		S	V _{DS} =10V, I _D =5A
R _{DS(ON)}		0.17	0.22	Ω	V _{GS} =10V, I _D =5A
C _{iss}		300		pF	V _{DS} =25V, f=1.0MHz,
C _{oss}		160		pF	V _{GS} =0V
t _{on}		35		ns	I _D =5A, V _{DD} ≐30V, V _{GS} =10V, see Fig. 3 on page 16.
t _{off}		35		ns	
V _{SD}		1.1	1.5	V	I _{SD} =5A
t _{rr}		150		ns	I _{SD} =±100mA

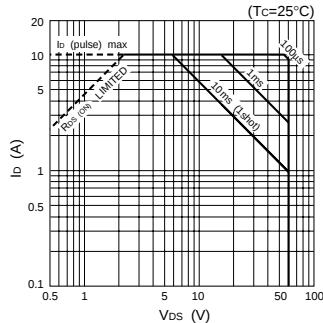
Equivalent circuit diagram



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