

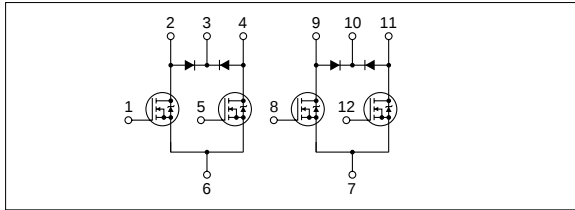
Absolute maximum ratings

(Ta=25°C)

Symbol	Ratings	Unit
V _{DSS}	100	V
V _{GSS}	±10	V
I _D	±5	A
I _{D(pulse)}	±10 (PW≤1ms)	A
E _{AS} *	32	mJ
I _F	5 (PW≤0.5ms, Ds≤25%)	A
I _{FSM}	10 (PW≤10ms, Single pulse)	A
V _R	120	V
P _T	4 (Ta=25°C, with all circuits operating, without heatsink) 28 (Tc=25°C, with all circuits operating, with infinite heatsink)	W
θ _{j-a}	31.2 (Junction-Air, Ta=25°C, with all circuits operating)	°C/W
θ _{j-c}	4.46 (Junction-Case, Tc=25°C, with all circuits operating)	°C/W
T _{ch}	150	°C
T _{stg}	-40 to +150	°C

* : V_{DD}=20V, L=2mH, I_D=5A, unclamped, see Fig. E on page 15.

Equivalent circuit diagram



Electrical characteristics

(Ta=25°C)

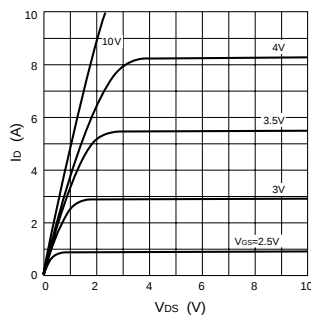
Symbol	Specification			Unit	Conditions
	min	typ	max		
V _{(BR)DSS}	100			V	I _D =250μA, V _{GS} =0V
I _{GSS}			±500	nA	V _{GS} =±10V
I _{DSS}			250	μA	V _{DS} =100V, V _{GS} =0V
V _{TH}	1.0		2.0	V	V _{DS} =10V, I _D =250μA
Re _(yfs)	3.1	4.5		S	V _{DS} =10V, I _D =5A
R _{DS(ON)}		0.27	0.30	Ω	V _{GS} =10V, I _D =2.5A
		0.38	0.41	Ω	V _{GS} =4V, I _D =2.5A
C _{iss}		470		pF	V _{DS} =25V, f=1.0MHz, V _{GS} =0V
C _{oss}		130		pF	
ton		70		ns	I _D =5A, V _{DD} =50V, V _{GS} =5V, see Fig. 3 on page 16.
toff		50		ns	
V _{SD}		1.2	2.0	V	I _{SD} =5A, V _{GS} =0V
t _{rr}		330		ns	I _{SD} =±100mA

Diode for flyback voltage absorption (1 circuit)

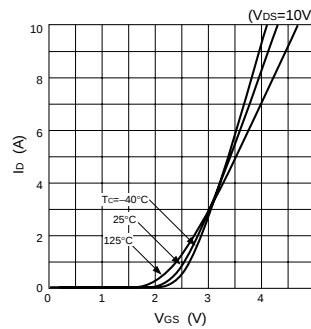
Symbol	Specification			Unit	Conditions
	min	typ	max		
V _R	120			V	I _R =10μA
V _F		1.0	1.2	V	I _F =1A
I _R			10	μA	V _R =120V
t _{rr}		100		ns	I _F =±100mA

Characteristic curves

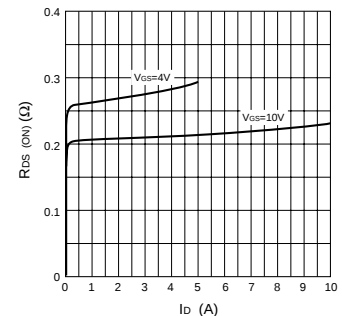
I_D-V_{DS} Characteristics (Typical)



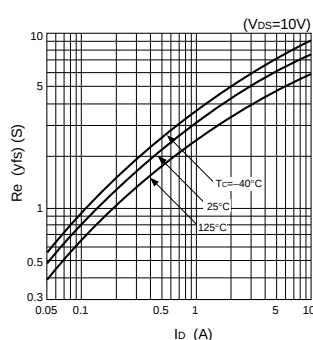
I_D-V_{GS} Characteristics (Typical)



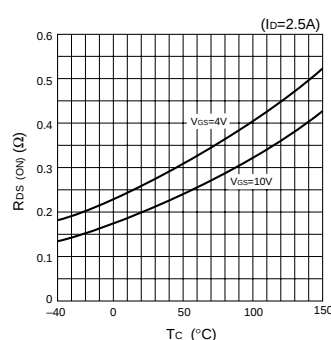
R_{DS(ON)}-I_D Characteristics (Typical)



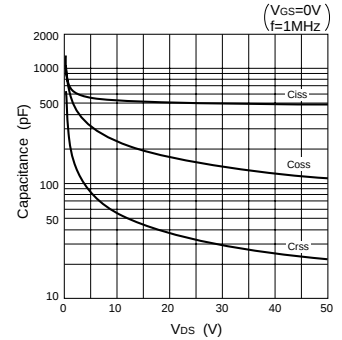
Re_(yfs)-I_D Characteristics (Typical)



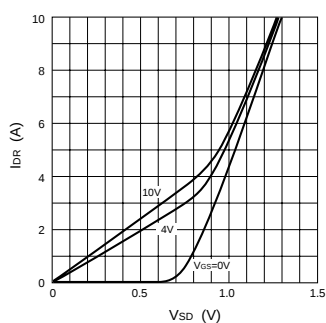
R_{DS(ON)}-T_C Characteristics (Typical)



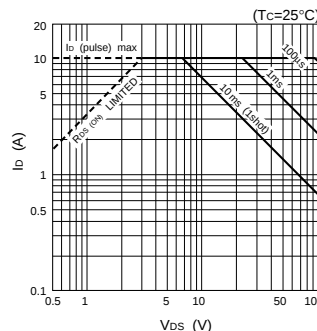
Capacitance-V_{DS} Characteristics (Typical)



I_{DR}-V_{SD} Characteristics (Typical)



Safe Operating Area (SOA)



P_T-T_a Characteristics

