

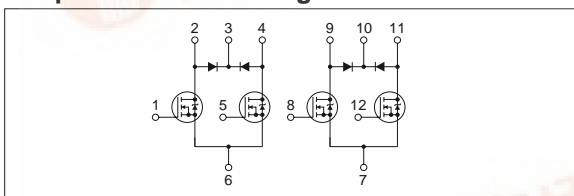
Absolute maximum ratings

(Ta=25°C)

Symbol	Ratings	Unit
V _{DSS}	100	V
V _{GSS}	±20	V
I _D	±5	A
I _{D(pulse)}	±10 (PW≤1ms)	A
E _{AS*}	30	mJ
I _F	5 (PW≤0.5ms, Du≤25%)	A
I _{FSM}	10 (PW≤10ms, Single Pulse)	A
V _R	120	V
P _T	5 (Ta=25°C, with all circuits operating, without heatsink) 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=10mH, I_D=2.5A, unclamped, see Fig. E on page 15

Equivalent circuit diagram



Electrical characteristics

(Ta=25°C)

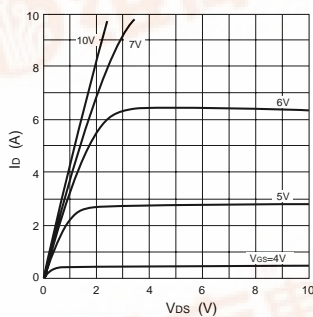
Symbol	Specification			Unit	Conditions
	min	typ	max		
V _{(BR)DSS}	100			V	I _D =250μA, V _{GS} =0V
I _{GSS}			±500	nA	V _{GS} =±20V
I _{DSS}			250	μA	V _{DS} =100V, V _{GS} =0V
V _{TH}	2.0		4.0	V	V _{DS} =10V, I _D =250μA
R _{e(yfs)}	2.4	3.7		S	V _{DS} =10V, I _D =5A
R _{DS(ON)}		0.27	0.30	Ω	V _{GS} =10V, I _D =5A
C _{iss}		350		pF	V _{DS} =25V, f=1.0MHz, V _{GS} =0V
C _{oss}		130		pF	V _{DS} =25V, f=1.0MHz, V _{GS} =0V
t _{on}		60		ns	I _D =5A, V _{DD} =50V, V _{GS} =10V, see Fig. 3 on page 16.
t _{off}		40		ns	I _D =5A, V _{DD} =50V, V _{GS} =10V, see Fig. 3 on page 16.
V _{SD}		1.1	1.8	V	I _{SD} =5A, V _{GS} =0V
t _{rr}		330		ns	I _{SD} =±100mA

Diode for flyback voltage absorption

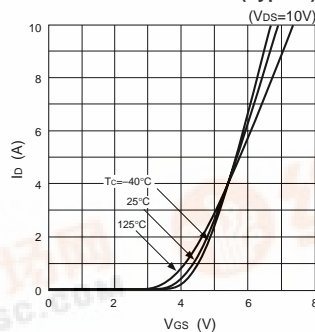
Symbol	Specification			Unit	Conditions
	min	typ	max		
V _R	120			V	I _R =10μA
V _F		1.0	1.2	V	I _F =1A
I _R			10	μA	V _R =120V
t _{rr}		100		ns	I _F =±100mA

Characteristic curves

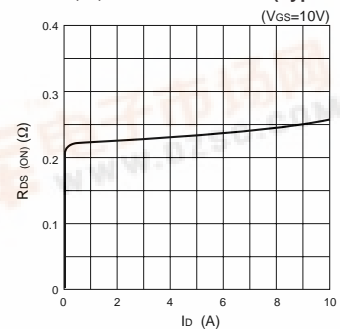
I_D-V_{DS} Characteristics (Typical)



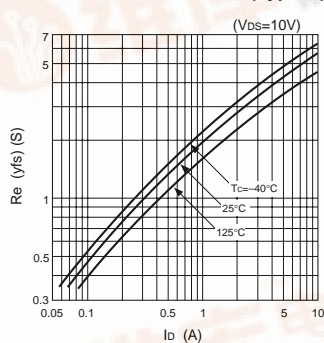
I_D-V_{GS} Characteristics (Typical)



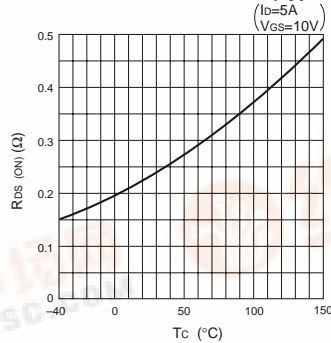
R_{DS(ON)}-I_D Characteristics (Typical)



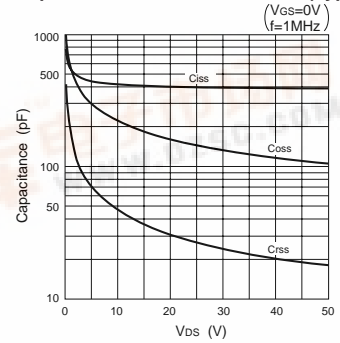
R_{e(yfs)}-I_D Characteristics (Typical)



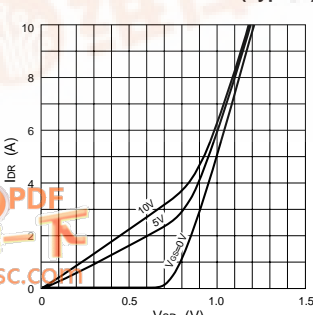
R_{DS(ON)}-T_C Characteristics (Typical)



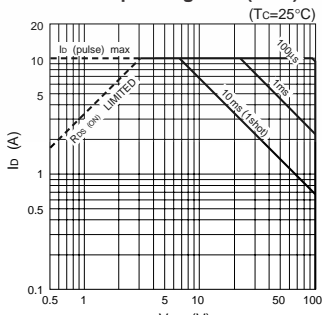
Capacitance-V_{DS} Characteristics (Typical)



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



Safe Operating Area (SOA)



P_T-T_a Characteristics

