

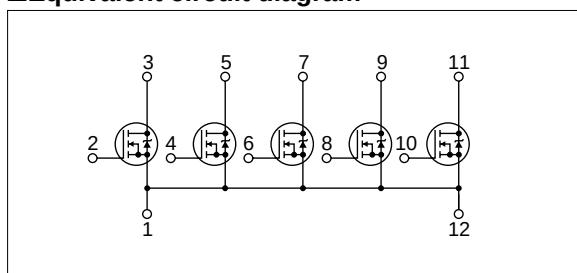
Absolute maximum ratings

($T_a=25^{\circ}\text{C}$)

Symbol	Ratings	Unit
V _{DSS}	100	V
V _{GSS}	±10	V
I _D	±5	A
I _D (pulse)	±10 (PW≤1ms)	A
E _{AS} *	60	mJ
P _Τ	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

* : $V_{DD}=20V$, $L=10mH$, $I_D=3A$, unclamped, see Fig. E on page 15.

■Equivalent circuit diagram



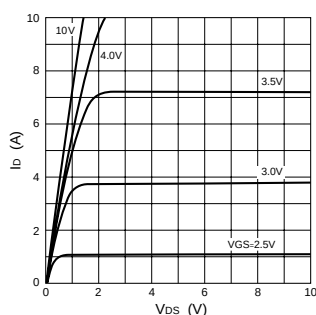
Electrical characteristics

($T_a=25^\circ\text{C}$)

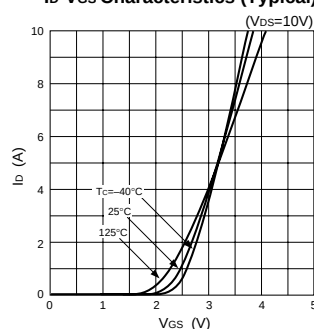
Symbol	Specification			Unit	Conditions
	min	typ	max		
$V_{(BR)DSS}$	100			V	$I_D=250\mu A, V_{GS}=0V$
I_{GSS}			± 500	nA	$V_{GS}=\pm 10V$
I_{DSS}			250	μA	$V_{DS}=100V, V_{GS}=0V$
V_{TH}	1.0		2.0	V	$V_{DS}=10V, I_D=250\mu A$
$R_{e(yfs)}$	4	6		S	$V_{DS}=10V, I_D=5A$
$R_{DS(ON)}$		0.18	0.19	Ω	$V_{GS}=10V, I_D=2.5A$
		0.19	0.25	Ω	$V_{GS}=4V, I_D=2.5A$
C_{iss}		880		pF	$V_{DS}=25V, f=1.0MHz,$ $V_{GS}=0V$
C_{oss}		240		pF	
t_{on}		90		ns	$I_D=5A, V_{DD}\doteq 50V, V_{GS}=5V,$ see Fig. 3 on page 16.
t_{off}		75		ns	
V_{SD}		1.1	1.5	V	$I_{SD}=5A, V_{GS}=0V$
t_{rr}		500		ns	$I_{SD}=\pm 100mA$

Characteristic curves

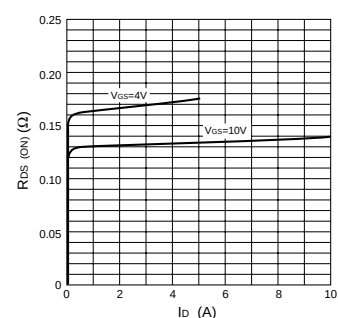
I_D - V_{DS} Characteristics (Typical)



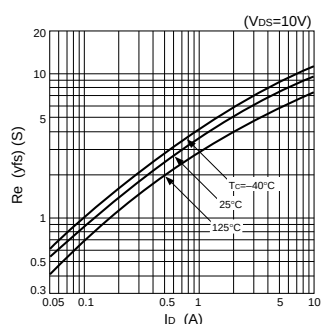
I_D - V_{GS} Characteristics (Typical)



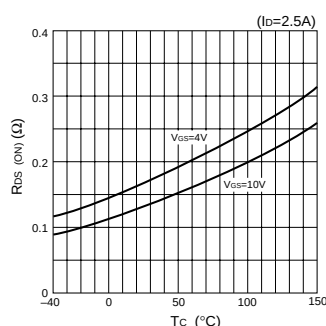
R_{DS(ON)}-I_D Characteristics (Typical)



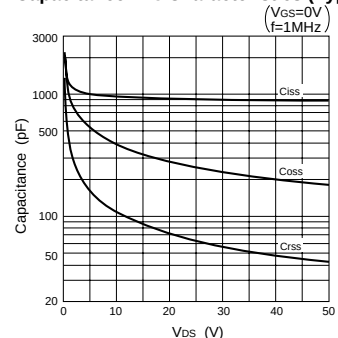
Re(yfs)-ID Characteristics (Typical)



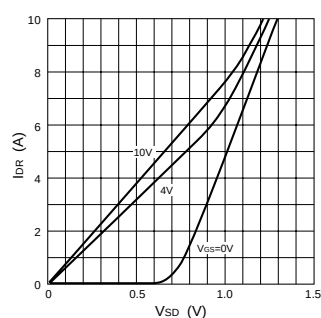
R_{DS(ON)}-T_C Characteristics (Typical)



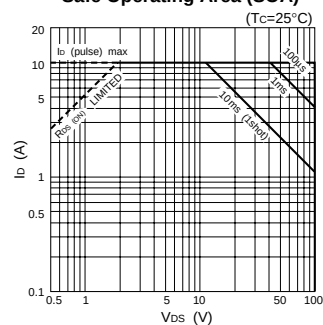
Capacitance- V_{DS} Characteristics (Typical)



IdR-VSD Characteristics (Typical)



Safe Operating Area (SOA)



P_T-T_a Characteristics

