

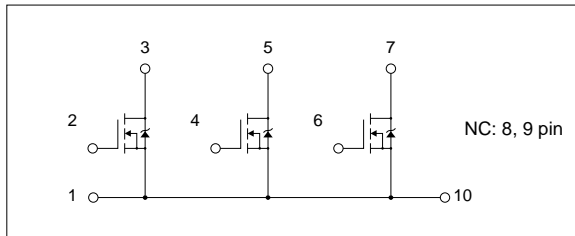
Absolute maximum ratings

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

Symbol	Ratings	Unit
V_{DSS}	250	V
V_{GSS}	± 20	V
I_D	3.5	A
$I_{D(pulse)}$	7 (PW \leq 1ms, duty \leq 1%)	A
V_{RSD}	250	V
I_{FSD}	7 (PW \leq 10ms)	A
E_{AS}^*	25	mJ
I_{AS}	3.5	A
P_T	3.5 ($T_a=25^\circ\text{C}$, with all circuits operating, without heatsink)	W
	15 ($T_c=25^\circ\text{C}$, with all circuits operating, with infinite heatsink)	W
θ_{j-a}	35.7 (Junction-Air, $T_a=25^\circ\text{C}$, with all circuits operating)	$^\circ\text{C/W}$
θ_{j-c}	8.33 (Junction-Case, $T_c=25^\circ\text{C}$, with all circuits operating)	$^\circ\text{C/W}$
T_{ch}	150	$^\circ\text{C}$
T_{stg}	-40 to +150	$^\circ\text{C}$

* : $V_{DD}=25\text{V}$, $L=4\text{mH}$, $I_D=3\text{A}$, unclamped, $R_G=50\Omega$, see Fig. E on page 15.

Equivalent circuit diagram



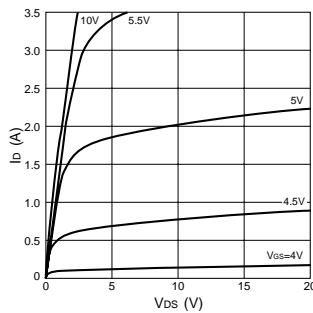
Electrical characteristics

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

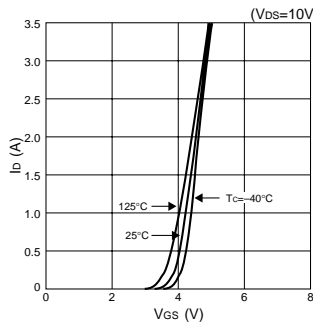
Symbol	Specification			Unit	Conditions
	min	typ	max		
$V_{(BR)DSS}$	250			V	$I_D=100\mu\text{A}$, $V_{GS}=0\text{V}$
I_{GSS}			± 100	nA	$V_{GS}=\pm 20\text{V}$
I_{DSS}			100	μA	$V_{DS}=250\text{V}$, $V_{GS}=0\text{V}$
V_{TH}	2.0		4.0	V	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$
$R_{e(yfs)}$	1.6	2.5		S	$V_{DS}=10\text{V}$, $I_D=1.5\text{A}$
$R_{DS(ON)}$		650	900	$\text{m}\Omega$	$V_{GS}=10\text{V}$, $I_D=1.5\text{A}$
C_{iss}	175	250	325	pF	$V_{DS}=10\text{V}$, $f=1.0\text{MHz}$, $V_{GS}=0\text{V}$
C_{oss}	110	160	210	pF	
C_{rss}	40	60	80	pF	
$t_{d(on)}$	12	18	24	ns	$I_D=1.5\text{A}$, $V_{DD}\div 100\text{V}$, $R_L=66.7\Omega$, $V_{GS}=10\text{V}$, $R_{GS}=50\Omega$, see Fig. 3 on page 16.
t_r	21	30	40	ns	
$t_{d(off)}$	56	80	104	ns	
t_f	38	55	72	ns	
V_{SD}		1.0	1.5	V	$I_{SD}=3\text{A}$, $V_{GS}=0\text{V}$
t_{rr}	50	75	150	ns	$I_{SD}=3.5\text{A}$, $V_{GS}=0\text{V}$ $di/dt=100\text{A}/\mu\text{s}$

Characteristic curves

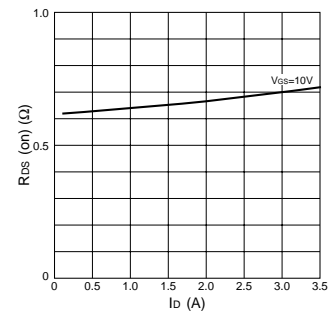
I_D - V_{DS} Characteristics (Typical)



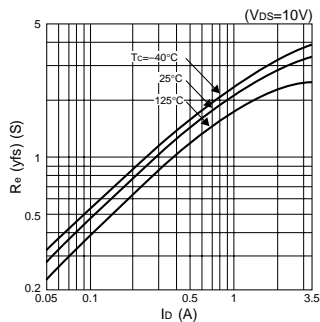
I_D - V_{GS} Characteristics (Typical)



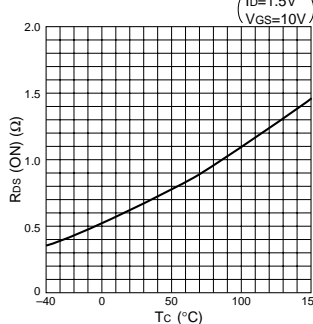
$R_{DS(ON)}$ - I_D Characteristics (Typical)



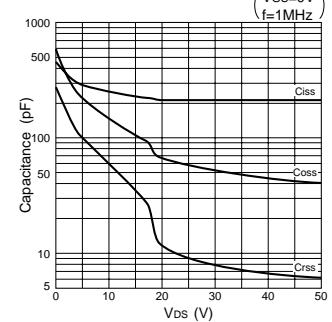
$R_{e(yfs)}$ - I_D Characteristics (Typical)



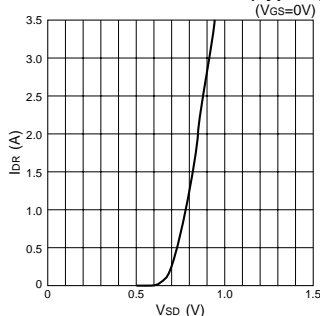
$R_{DS(ON)}$ - T_c Characteristics (Typical)



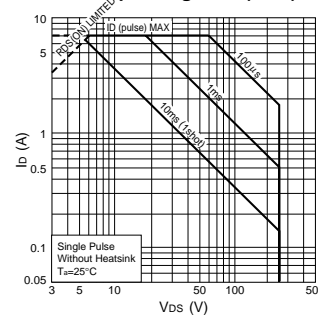
Capacitance- V_{DS} Characteristics (Typical)



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



Safe Operating Area (SOA)



P_T - T_a Characteristics

