

Absolute maximum ratings

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

Symbol	Ratings	Unit
V_{DSS}	-100	V
V_{GSS}	∓ 20	V
I_D	∓ 5	A
$I_{D(\text{pulse})}$	∓ 10 ($PW \leq 1\text{ms}$)	A
I_F	5 ($PW \leq 0.5\text{ms}$, $D_u \leq 25\%$)	A
I_{FSM}	10 ($PW \leq 10\text{ms}$, Single pulse)	A
V_R	120	V
P_T	5 ($T_a=25^\circ\text{C}$, with all circuits operating, without heatsink)	W
	35 ($T_c=25^\circ\text{C}$, with all circuits operating, with infinite heatsink)	W
θ_{j-a}	25 (Junction-Air, $T_a=25^\circ\text{C}$, with all circuits operating)	$^\circ\text{C}/\text{W}$
θ_{j-c}	3.57 (Junction-Case, $T_c=25^\circ\text{C}$, with all circuits operating)	$^\circ\text{C}/\text{W}$
V_{ISO}	1000 (Between fin and lead pin, AC)	Vrms
T_{ch}	150	$^\circ\text{C}$
T_{stg}	-40 to +150	$^\circ\text{C}$

Electrical characteristics

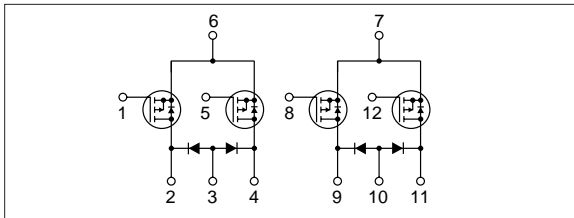
($T_a=25^\circ\text{C}$)

Symbol	Specification			Unit	Condition
	min	typ	max		
$V_{(BR)DSS}$	-100			V	$I_D = -250\mu\text{A}$, $V_{GS}=0\text{V}$
I_{GSS}			∓ 500	nA	$V_{GS} = \mp 20\text{V}$
I_{DSS}			-250	μA	$V_{DS} = -100\text{V}$, $V_{GS}=0\text{V}$
V_{TH}	-2.0		-4.0	V	$V_{DS} = -10\text{V}$, $I_D = -250\mu\text{A}$
$R_{e(yfs)}$	0.9	2.0		S	$V_{DS} = -10\text{V}$, $I_D = -5\text{A}$
$R_{DS(ON)}$		0.55	0.7	Ω	$V_{GS} = -10\text{V}$, $I_D = -5\text{A}$
C_{iss}		300		pF	$V_{DS} = -25\text{V}$, $f = 1.0\text{MHz}$, $V_{GS} = 0\text{V}$
C_{oss}		200		pF	
t_{on}		150		ns	$I_D = -5\text{A}$, $V_{DD} = -50\text{V}$, $V_{GS} = -10\text{V}$,
t_{off}		200		ns	see Fig. 4 on page 16.
V_{SD}	-4.5		-5.5	V	$I_{SD} = -5\text{A}$, $V_{GS} = 0\text{V}$
t_{rr}		220		ns	$I_{SD} = \mp 100\text{mA}$

Diode for flyback voltage absorption

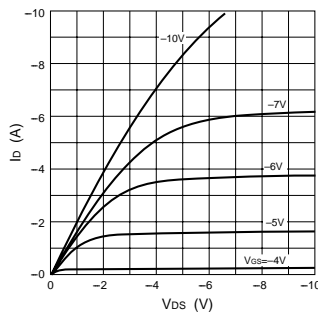
Symbol	Specification			Unit	Condition
	min	typ	max		
V_R	120			V	$I_R = 10\mu\text{A}$
V_F		1.0	1.2	V	$I_F = 1\text{A}$
I_R			10	μA	$V_R = 120\text{V}$
t_{rr}		100		ns	$I_F = \mp 100\text{mA}$

Equivalent circuit diagram

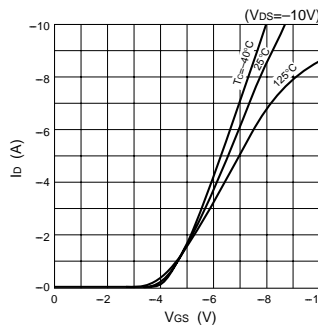


Characteristic curves

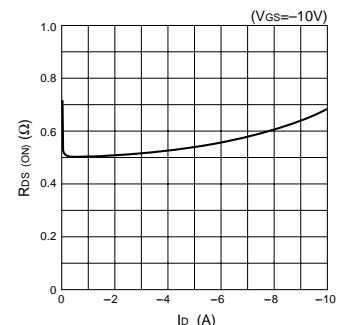
I_D - V_{DS} Characteristics (Typical)



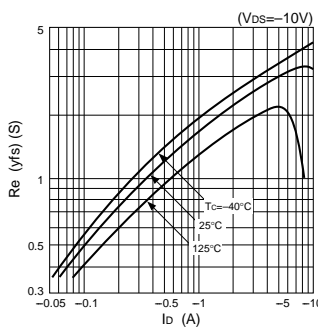
I_D - V_{GS} Characteristics (Typical)



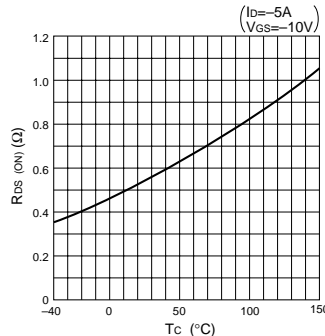
$R_{DS(ON)}$ - I_D Characteristics (Typical)



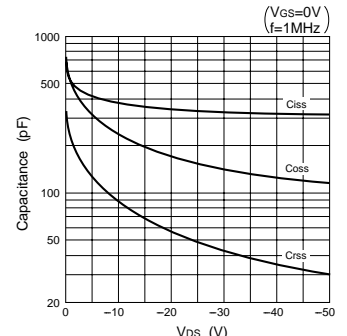
$R_{e(yfs)}$ - I_D Characteristics (Typical)



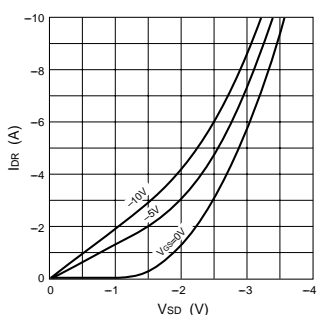
$R_{DS(ON)}$ - T_c Characteristics (Typical)



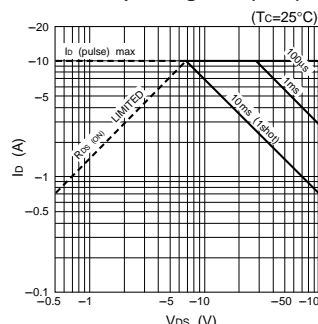
Capacitance- V_{DS} Characteristics (Typical)



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



Safe Operating Area (SOA)



P_T - T_a Characteristics

