

## Absolute maximum ratings

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

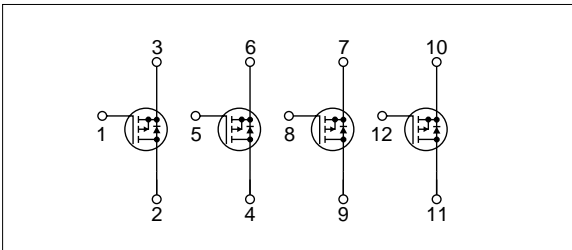
Symbol	Ratings	Unit
$V_{DSS}$	-100	V
$V_{GSS}$	$\pm 20$	V
$I_D$	$\pm 5$	A
$I_{D(pulse)}$	$\pm 10$ ( $PW \leq 1\text{ms}$ )	A
$P_T$	5 ( $T_a=25^\circ\text{C}$ , with all circuits operating, without heatsink)	W
	35 ( $T_c=25^\circ\text{C}$ , with all circuits operating, with infinite heatsink)	W
$\theta_{j-a}$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

## Electrical characteristics

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

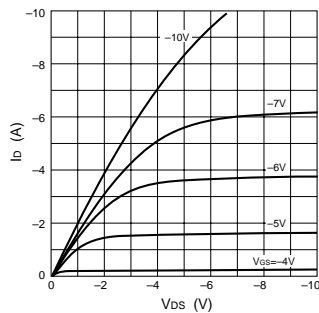
Symbol	Specifications			Unit	Condition
	min	typ	max		
$V_{(BR)DSS}$	-100			V	$I_D=-250\mu\text{A}$ , $V_{GS}=0\text{V}$
$I_{GSS}$			$\pm 500$	nA	$V_{GS}=\pm 20\text{V}$
$I_{DSS}$			-250	$\mu\text{A}$	$V_{DS}=-100\text{V}$ , $V_{GS}=0\text{V}$
$V_{TH}$	-2.0		-4.0	V	$V_{DS}=-10\text{V}$ , $I_D=-250\mu\text{A}$
$R_{e(yfs)}$	0.9	2.0		S	$V_{DS}=-10\text{V}$ , $I_D=-5\text{A}$
$R_{DS(ON)}$		0.55	0.7	$\Omega$	$V_{GS}=-10\text{V}$ , $I_D=-5\text{A}$
$C_{iss}$		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	$I_{SD}=\pm 100\text{mA}$

## Equivalent circuit diagram

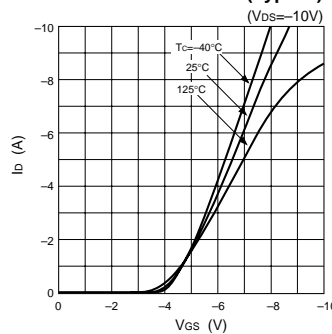


## Characteristic curves

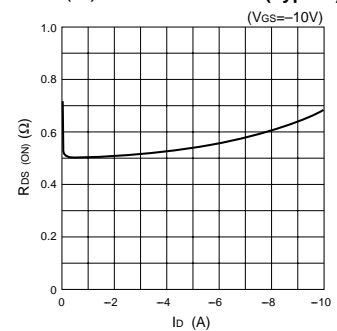
$I_D$ - $V_{DS}$  Characteristics (Typical)



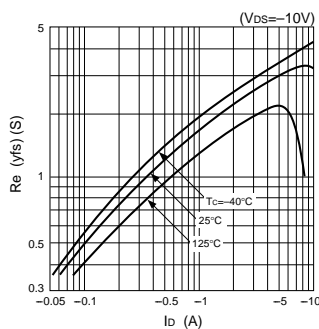
$I_D$ - $V_{GS}$  Characteristics (Typical)



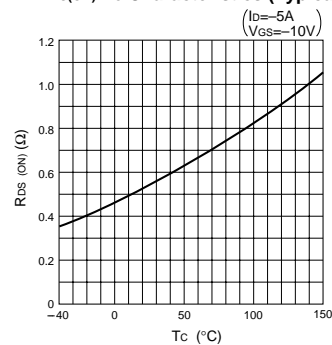
$R_{DS(ON)}$ - $I_D$  Characteristics (Typical)



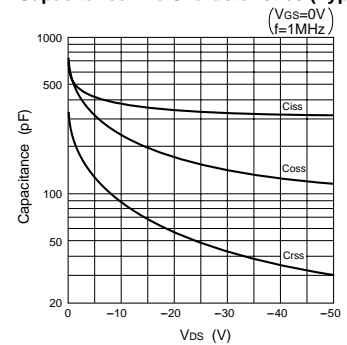
$R_{e(yfs)}$ - $I_D$  Characteristics (Typical)



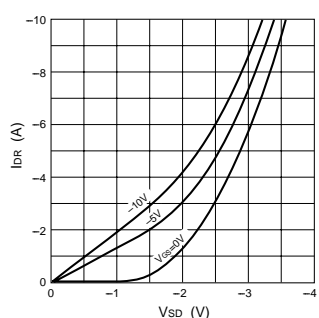
$R_{DS(ON)}$ - $T_c$  Characteristics (Typical)



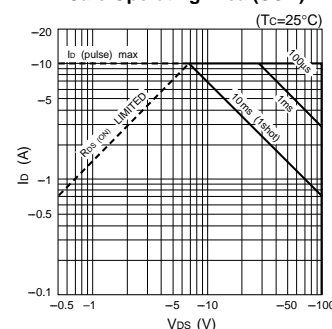
Capacitance- $V_{DS}$  Characteristics (Typical)



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



Safe Operating Area (SOA)



$P_T$ - $T_a$  Characteristics

