

### Absolute maximum ratings

(Ta=25°C)

Symbol	Ratings	Unit
V <sub>DSS</sub>	100	V
V <sub>GSS</sub>	±20	V
I <sub>D</sub>	±5	A
I <sub>D(pulse)</sub>	±10(PW≤1ms)	A
E <sub>AS</sub> *	30	mJ
P <sub>T</sub>	5 (Ta=25°C, with all circuits operating, without heatsink)	W
	35 (Tc=25°C, with all circuits operating, with infinite heatsink)	W
θ <sub>j-a</sub>	25 (Junction-Air, Ta=25°C, with all circuits operating)	°C/W
θ <sub>j-c</sub>	3.57 (Junction-Case, Tc=25°C, with all circuits operating)	°C/W
V <sub>ISO</sub>	1000 (Between fin and lead pin, AC)	V <sub>rms</sub>
T <sub>ch</sub>	150	°C
T <sub>stg</sub>	-40 to +150	°C

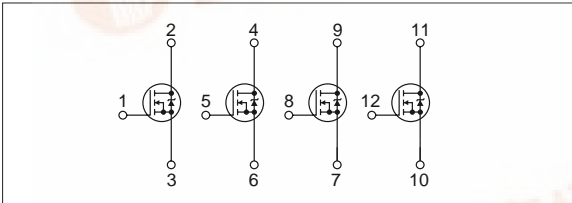
### Electrical characteristics

(Ta=25°C)

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

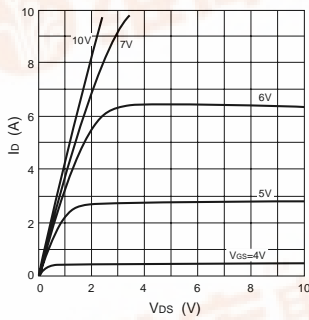
\* : V<sub>DD</sub>=20V, L=10mH, I<sub>D</sub>=2.5A, unclamped, see Fig. E on page 15.

### Equivalent circuit diagram

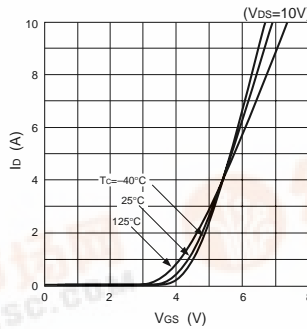


### Characteristic curves

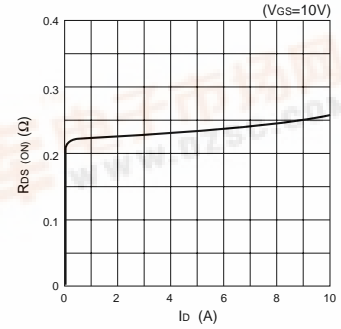
I<sub>D</sub>-V<sub>DS</sub> Characteristics (Typical)



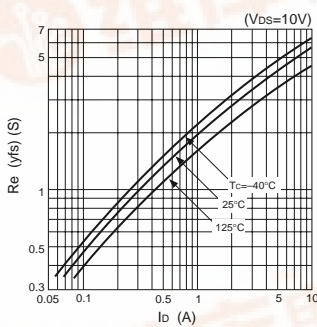
I<sub>D</sub>-V<sub>GS</sub> Characteristics (Typical)



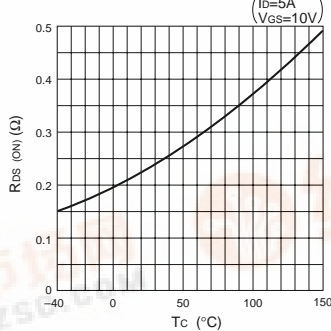
R<sub>DS(ON)</sub>-I<sub>D</sub> Characteristics (Typical)



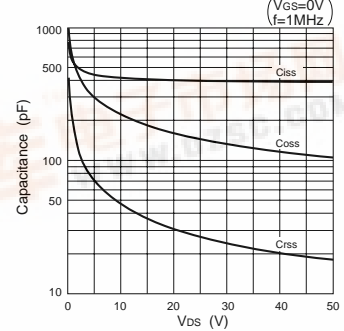
R<sub>e(yfs)</sub>-I<sub>D</sub> Characteristics (Typical)



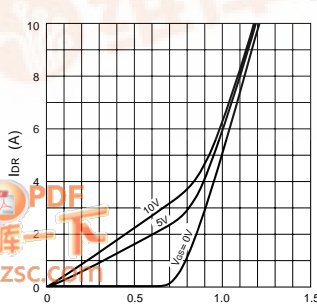
R<sub>DS(ON)</sub>-T<sub>C</sub> Characteristics (Typical)



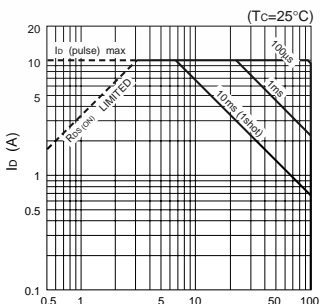
Capacitance-V<sub>DS</sub> Characteristics (Typical)



I<sub>DR</sub>-V<sub>SD</sub> Characteristics (Typical)



Safe Operating Area (SOA)



P<sub>T</sub>-T<sub>a</sub> Characteristics

