

### Absolute maximum ratings

(Ta=25°C)

Symbol	Ratings	Unit
V <sub>DSS</sub>	60	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> *	2	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

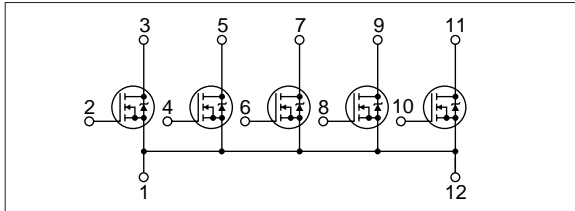
### Electrical characteristics

(Ta=25°C)

Symbol	Specification			Unit	Conditions
	min	typ	max		
V <sub>(BR)DSS</sub>	60			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> =60V, V <sub>GS</sub> =0V
V <sub>TH</sub>	2.0		4.0	V	V <sub>DS</sub> =10V, I <sub>D</sub> =250μA
Re(yfs)	2.2	3.3		S	V <sub>DS</sub> =10V, I <sub>D</sub> =5A
R <sub>DS(ON)</sub>		0.17	0.22	Ω	V <sub>GS</sub> =10V, I <sub>D</sub> =5A
C <sub>ISS</sub>		300		pF	V <sub>DS</sub> =25V, f=1.0MHz, V <sub>GS</sub> =0V
C <sub>OSS</sub>		160		pF	
ton		35		ns	I <sub>D</sub> =5A, V <sub>DD</sub> ≐30V, V <sub>GS</sub> =10V, see Fig. 3 on page 16.
toff		35		ns	
V <sub>SD</sub>		1.1	1.5	V	I <sub>SD</sub> =5A
t <sub>rr</sub>		150		ns	I <sub>SD</sub> =±100mA

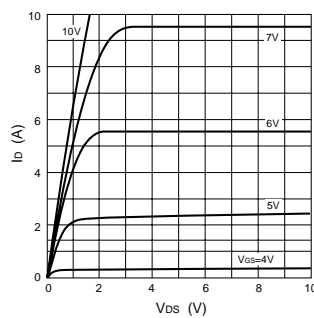
\* : V<sub>DD</sub>=20V, L=1mH, I<sub>b</sub>=1.5A, unclamped, see Fig. E on page 15.

### Equivalent circuit diagram

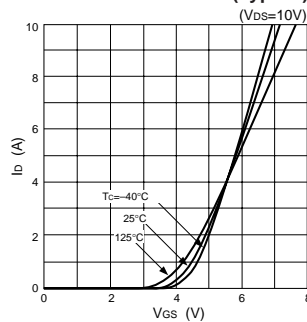


### Characteristic curves

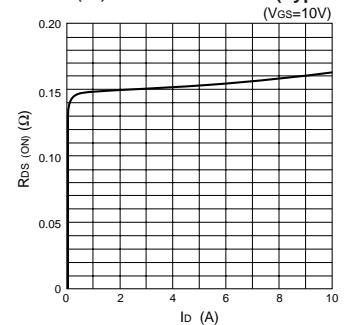
I<sub>D</sub>-V<sub>DS</sub> Characteristics (Typical)



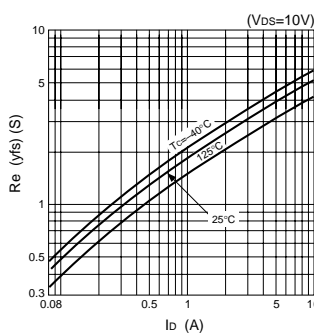
I<sub>D</sub>-V<sub>GS</sub> Characteristics (Typical)



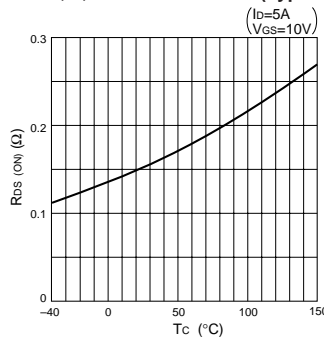
R<sub>DS(ON)</sub>-I<sub>D</sub> Characteristics (Typical)



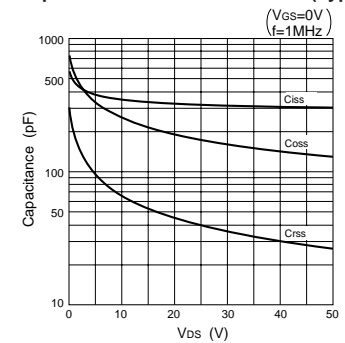
Re(y<sub>fs</sub>)-I<sub>D</sub> Characteristics (Typical)



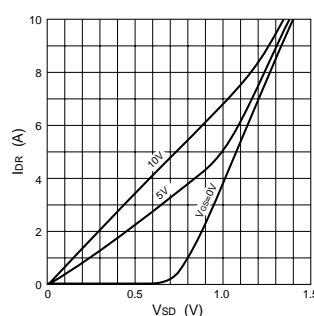
R<sub>DS(ON)</sub>-T<sub>C</sub> Characteristics (Typical)



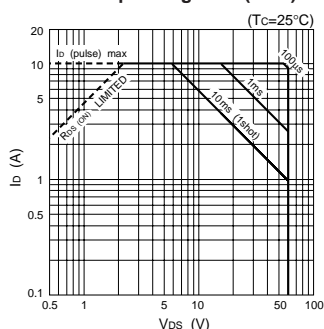
Capacitance-V<sub>DS</sub> Characteristics (Typical)



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



Safe Operating Area (SOA)



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

