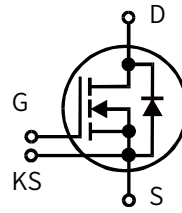


$V_{DSS} = 200V$
 $I_{D25} = 580A$
 $R_{DS(ON)} = 3.8m\Omega$

Features

- HiPerFET™ technology
 - low R_{DSon}
 - dv/dt ruggedness
 - fast intrinsic reverse diode
- package
 - low inductive current path
 - screw connection to high current main terminals
 - use of non interchangeable connectors for auxiliary terminals possible
 - Kelvin source terminals for easy drive
 - isolated ceramic base plate



N-Channel Enhancement Mode

Applications

- converters with high power density for
 - main and auxiliary AC drives of electric vehicles
 - DC drives
 - power supplies

Preliminary Data - MOSFET

Symbol	Conditions	Maximum Ratings	Unit
V_{DSS}	$T_{VJ} = 25^{\circ}C \text{ to } 150^{\circ}C$	200	V
V_{GS}		± 20	V
I_{D25}	$T_C = 25^{\circ}C$	580	A
I_{D80}	$T_C = 80^{\circ}C$	430	A
I_{F25}	(diode) $T_C = 25^{\circ}C$	580	A
I_{F80}	(diode) $T_C = 80^{\circ}C$	430	A

Characteristic Values ($T_{VJ} = 25^{\circ}C$, unless otherwise specified)

Symbol	Conditions	min.	typ.	max.	Unit
R_{DSon}	$V_{GS} = 10V; I_D = I_{D80}$		3.2	3.8	m Ω
V_{Gsth}	$V_{DS} = 20V; I_D = 50mA$	2		4	V
I_{DSS}	$V_{DS} = 0.8 \cdot V_{DSS}; V_{GS} = 0V; T_{VJ} = 25^{\circ}C$			2.6	mA
	$T_{VJ} = 125^{\circ}C$		3		mA
I_{GSS}	$V_{GS} = \pm 20V; V_{DS} = 0V$			1	μA
Q_g	$V_{GS} = 10V; V_{DS} = 0.5 \cdot V_{DSS}; I_D = I_{D80}$		2750		nC
Q_{gs}			500		nC
Q_{gd}			1350		nC

$t_{d(on)}$	$V_{GS} = 10\text{ V}; V_{DS} = 0.5 \cdot V_{DSS};$ $I_D = I_{D80}; R_G = 1\ \Omega$		210		ns
t_r			500		ns
$t_{d(off)}$			900		ns
t_f			350		ns
V_F	(diode) $I_F = 300\text{ A}; V_{GS} = 0\text{ V}$		0.9	1.1	V
t_{rr}	(diode) $I_F = 300\text{ A}; -di/dt = 500\text{ A}/\mu\text{s}; V_{DS} = \frac{1}{2} V_{DSS}$		300		ns
R_{thJC}	with heat transfer paste			0.05	K/W
R_{thJS}			0.07		K/W

Module

Symbol	Conditions	Maximum Ratings	Unit
T_{VJ}		-40...+150	°C
T_{stg}		-40...+125	°C
V_{ISOL}	$I_{SOL} \leq 1\text{ mA}; 50/60\text{ Hz}$	3600	V~
M_d	Mounting torque (M6)	2.25 - 2.75	Nm
	Terminal connection torque (M6)	4.5 - 5.5	Nm

Symbol	Conditions	min.	typ.	max.	Unit
Weight			250		g

Optional accessories for modules

keyed twin plugs

(UL758, style 1385, CSA class 5851, guide 460-1-1)

- Type ZY180L with wire length 350mm
 - for pins 4 (yellow wire) and 5 (red wire)
 - for pins 11 (yellow wire) and 10 (red wire)
- Type ZY180R with wire length 350mm
 - for pins 7 (yellow wire) and 6 (red wire)
 - for pins 8 (yellow wire) and 9 (red wire)

Dimensions in mm (1 mm = 0.0394")

