

STA517A

N-channel

General purpose/3-phase motor drive

External dimensions C...STA (10-pin)

Absolute maximum ratings

(Ta=25°C)

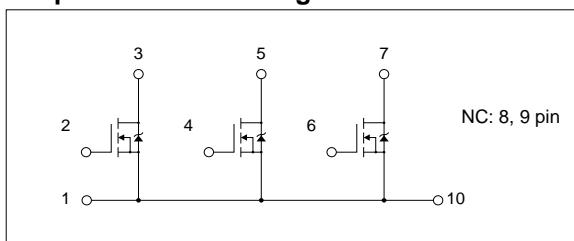
Symbol	Ratings	Unit
V _{DSS}	305	V
V _{GSS}	±20	V
I _D	3	A
I _{D(pulse)}	6 (PW≤1ms, Du≤1%)	A
P _T	3.5 (Ta=25°C) 15 (Tc=25°C)	W
θ _{j-a}	35.7 (with all circuits operating)	°C/W
θ _{j-c}	8.33 (with all circuits operating)	°C/W
T _{ch}	150	°C
T _{tsg}	-40 to +150	°C

Electrical characteristics

(Ta=25°C)

Symbol	Specification			Unit	Conditions
	min	typ	max		
V _{(BR)DSS}	305			V	I _D =100μA, V _{GS} =0V
I _{GSS}			±100	nA	V _{GS} =±20V
I _{DSS}			100	μA	V _{DS} =350V, V _{GS} =0V
V _{TH}	2.0		4.0	V	V _{DS} =10V, I _D =1mA
R _{e(yfs)}		2.5		S	V _{DS} =10V, I _D =1.5A
R _{DSD(ON)}		1.4	1.8	Ω	V _{GS} =10V, I _D =1.5A
C _{iss}		240		pF	V _{DS} =10V, f=1.0MHz,
C _{oss}		120		pF	V _{GS} =0V
C _{rss}		50		pF	
t _{d(on)}		10		ns	I _D =3A, V _{DD} =100V,
t _r		30		ns	R _L =33.3Ω, V _{GS} =10V, R _{GS} =50Ω
t _{d(off)}		35		ns	see Fig. 3 on page 16.
t _f		20		ns	
V _{SD}		1.1		V	I _D =3A, V _{GS} =0V

■Equivalent circuit diagram



— Characteristic curves —